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CAPE OF GOOD HOPE
PARLIAMENT
LEGISLATIVE COUNCIL

SELECT COMMITTEE TO
CONSIDER PLANS FOR
THE IMPROVEMENT OF
PORT ELIZABETH HARBOUR

REPORT

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REPORT
OF THE

ELECT COMMITTEE

APPOINTED BY THE

LEGISLATIVE COUNCIL

TO CONSIDER AND REPORT UPON PLANS FOR THE IMPROVEMENT OF

PORT ELIZABETH HARBOUR.



Published by Order of the Legislative Assembly.

1880.

CAPE TOWN:

SOLOMON & CO., STEAM PRINTFRS, ST. GEORGE'S STREET.
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1—'80, PORT ELIZABETH



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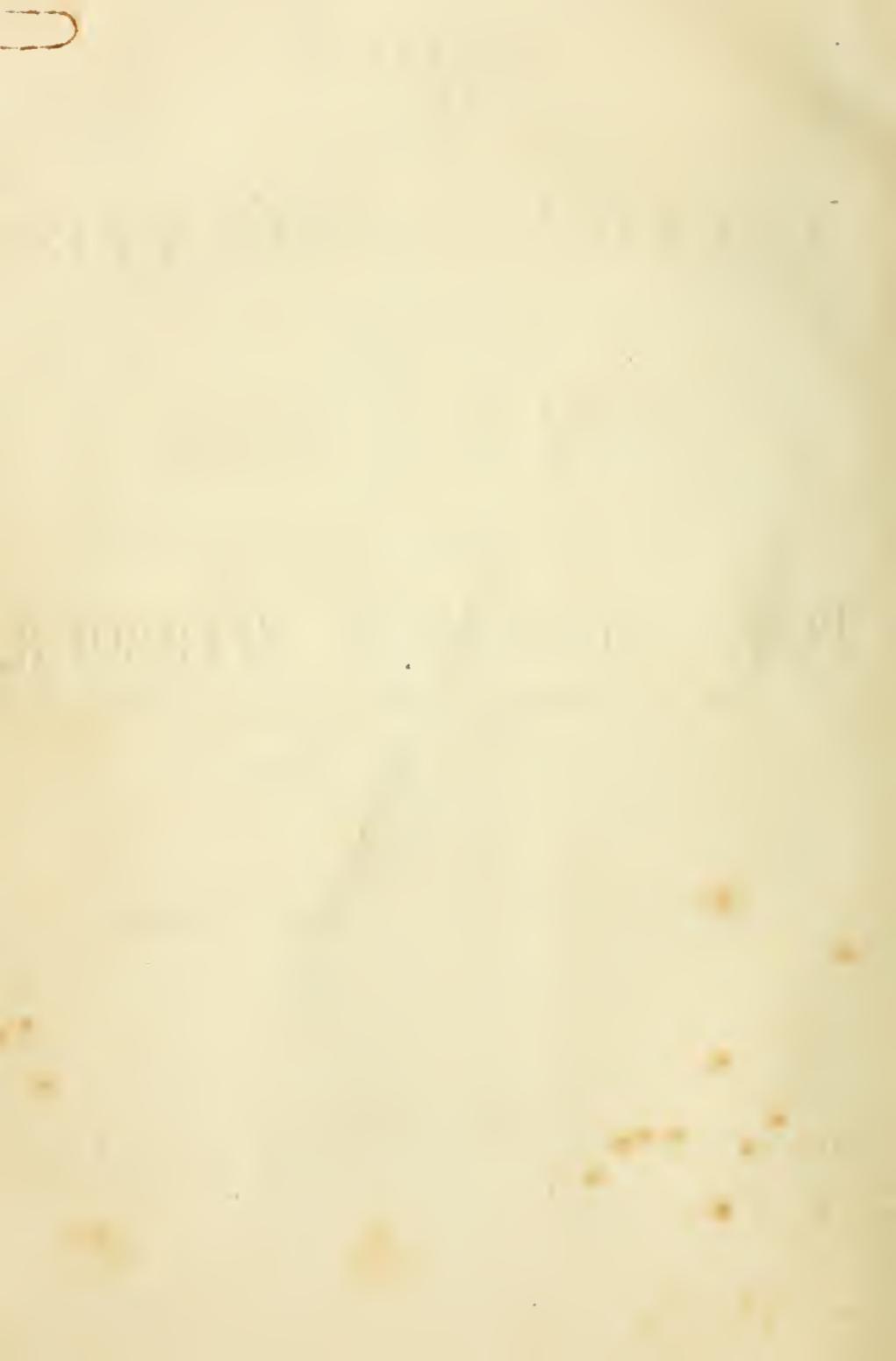
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REPORT

OF THE

SELECT COMMITTEE appointed on the 2nd June, 1880, to which was referred the Petition of the Inhabitants of PORT ELIZABETH, in favour of the speedy execution of such plans as may carry out certain IMPROVEMENTS of the HARBOUR of PORT ELIZABETH; consisting of Messrs. GEARD, DE SMIDT, EBDEN, HUTTON, MURISON, and HUDSON.

Your Committee having considered the Petition of the inhabitants of Port Elizabeth on the improvement of that harbour, and examined several witnesses and papers laid before them, beg to report as follows:—

1. They consider it fully proved by the evidence before them that the present appliances for landing and shipping goods, and for landing and embarking passengers, are attended with considerable risk both to life and property, and inadequate to the requirements of the trade of the port.
2. That, while the construction of further jetty accommodation, as proposed by Government, will doubtless give increased facilities for the work required, we consider that the important and extensive trade of the port require and justify works such as those proposed by Sir John Coode, or works of a somewhat similar character, with a view of providing, if possible, safer anchorage for vessels, and of securing the landing and shipping of goods and landing and embarking of passengers in all weathers.
3. Your Committee do not feel themselves competent, on their own judgment, or from the information before them, to give any opinion as to the desira-

bility of carrying out the exact plan proposed by Sir John Coode; but in view of the very important character of the undertaking, would strongly urge upon the Government to put themselves into immediate communication with Sir John Coode, and request him to allow his plans, with the data upon which they are based, to be submitted to a commission, consisting of himself and two other eminent engineers, which commission should be empowered to obtain any further information they may require to enable them to form an opinion, and to report to the Government upon Sir John Coode's plans, and if they do not approve of such plans, to recommend such other works as they may think calculated to improve the harbour; and your Committee are of opinion that the evidence of Mr. A. J. Andrews and Mr. Neate, who have both visited the port professionally, would be of great service to such a commission.

4. Your Committee are also of opinion that it will be inexpedient to proceed with the construction of jetty B until the report of such commission has been obtained.

JOHN GEARD, Chairman.

Council Committee Rooms,
June 17, 1880.

PROCEEDINGS OF COMMITTEE.

Tuesday, 9th June 1880.

PRESENT :

Mr. Geard,	Mr. Murison,
„ Hutton,	„ Ebden,
„ De Smidt,	„ Hudson.

Resolved,—That Mr. Geard be Chairman of this Committee. Order of Council, dated June 2nd 1880, appointing the Committee, read.

Petition of inhabitants of Port Elizabeth, referred by Council to the Committee, read.

The Chairman lays before the Committee the following papers [See Appendix] :—

1. Petition of inhabitants of Port Elizabeth.
2. Precis of Correspondence between the Commissioners for Improving the Harbour of Algoa Bay and the Honourable Commissioner of Public Works on the subject of Harbour Improvement.
3. Report of Sir John Coode on the Harbour of Port Elizabeth, August, 1877.
4. Correspondence between the Honourable Commissioner of Public Works and the Port Elizabeth Harbour Board on Sir John Coode's plans and the construction of jetties.
5. Report of a Committee of the Port Elizabeth Board on the construction of jetties.
6. Papers on the shipping and trade of Port Elizabeth.

Committee in deliberation.

Resolved,—That the Chairman apply to the Honourable Commissioner of Public Works, requesting him to furnish this Committee with (1) the plan or copy thereof, accompanying the report of the Harbour Board of Port Elizabeth as to the sites of the jetties proposed to be constructed there, dated November 12, 1879; also (2), the reply of Sir John Coode to that proposal; and (3) a copy of the report of the Port Elizabeth Harbour Board on Sir John Coode's plans, dated April 9, 1878.

Resolved,—That Mr. Hume and Mr. Lamb be invited to attend the meeting of the Committee to-morrow, and Mr. Andrews on Friday next, for the purpose of giving evidence.

Wednesday, 9th June, 1880.

PRESENT :

Mr. GEARD (Chairman),

Mr. Hutton,
,, De Smidt,
,, Ebden,

Mr. Murison,
,, Hudson.

Minutes of last meeting read and approved.

Mr. William Hume examined.

Committee in deliberation.

Committee adjourns till to-morrow, at 10 o'clock.

Thursday, 10th June, 1880.

PRESENT :

Mr. GEARD (Chairman),

Mr. Hudson,
,, Hutton,

Mr. Murison.

Mr. James Lamb examined.

Committee adjourns till to-morrow, at 11:30 o'clock.

Friday, 11th June, 1880.

PRESENT :

Mr. GEARD (Chairman),

Mr. Hutton,
,, De Smidt,

Mr. Ebden,
,, Hudson.

Mr. Ebden and Mr. De Smidt requested it should be noted on the minutes that they had both received erroneous notices as to the hour fixed for the last meeting, which prevented their attendance in time for business.

Mr. A. T. Andrews, C.E., examined.

Resolved,—That Mr. Walker and Mr. Kirkwood be requested to attend the next meeting of Committee for the purpose of giving evidence.

Committee adjourns till Tuesday, the 15th instant, at 10 o'clock.

Tuesday, 15th June, 1880.

PRESENT :

Mr. GEARD (Chairman),

Mr. Ebden,
,, De Smidt,

Mr. Hutton,
,, Hudson.

Mr. James Somers Kirkwood, M.L.A., examined.
Committee adjourns till to-morrow, at 11·30 o'clock.

Wednesday, 16th June, 1880.

PRESENT :

Mr. GEARD (Chairman),

Mr. De Smidt,
,, Hudson,

Mr. Murison,
,, Ebden.

Mr. Joseph Walker, M.L.A., examined.
Committee adjourns till to-morrow, at 12 o'clock.

Thursday, 17th June, 1880.

PRESENT :

Mr. GEARD (Chairman),

Mr. Ebden,
,, Hudson,

Mr. De Smidt,
,, Hutton.

The Chairman submits the following papers, received from the Hon. Commissioner of Public Works :—

1. Copy of letter from Port Elizabeth Harbour Board to Honourable Commissioner of Public Works, dated April 12, 1878.
2. Report of sub-committee of Port Elizabeth Harbour Board on Sir John Coode's plans, dated April 19, 1878.
3. Copy of letter from Sir John Coode to Honourable Commissioner of Public Works, dated January 29, 1880.
4. Copy of letter from Sir John Coode to Honourable Commissioner of Public Works, dated February 26, 1880.

5. Memo. of wharfage and customs collected at Port Elizabeth from 1874 to 1879, extracted from report of Port Elizabeth Chamber of Commerce.
6. Abstract of minutes of meeting of Port Elizabeth Chamber of Commerce, held September 15, 1879.
And further correspondence and papers on trade of Port Elizabeth [Appendix].

Committee in discussion.

Mr. Ebden moves, and it is resolved,— That the Chairman be requested to ascertain from the Hon. Commissioner of Public Works whether the material required for jetty B has been counter-ordered. Also to obtain from the Hon. Commissioner of Public Works letters to him from the Port Elizabeth Harbour Board, dated April 29 and May 15.

Chairman submits draft report.

Committee in deliberation.

Report adopted; Chairman requested to report accordingly.

MINUTES OF EVIDENCE.

COMMITTEE ON PORT ELIZABETH.

Wednesday, 9th June, 1880.

PRESENT :

MR. GEARD (Chairman),

Mr. Hutton,	Mr. Ebden,
," De Smidt,	," Murison.
," Hudson,	

Mr. *William Hume* examined.

1. *Chairman.*] You are a merchant residing at Port *W. Hume* Elizabeth, and have resided there some time?—Yes, for *June 9, 1880.* over sixteen years.

2. You are also a member of the Chamber of Commerce there?—I am.

3. You are well acquainted with the requirements of the import and export trade of Port Elizabeth, as regards the landing and shipping of cargo and the landing and shipping of passengers?—Yes.

4. Do you think the present facilities for such work meet the requirements of the trade of the port?—No.

5. You are aware that Sir John Coode has been consulted, and has submitted to Government a plan for the improvement of the port?—Yes.

6. You are also aware that the Government have declined to adopt that plan, and have authorized the construction of jetties instead?—Yes.

7. And you are aware that the Harbour Board of Port Elizabeth have recommended certain sites upon which these jetties should be constructed?—Yes.

Mr. W. Hume. 8. Are you of opinion that it would be desirable to construct those jetties?—Not so far as jetty B is concerned.

9. Are you aware that Sir John Coode has also objected to jetty B?—Yes. He has stated that the construction of jetty B would interfere with the construction of larger works.

10. Is it your opinion that such larger works are necessary for the trade of the port?—I have no hesitation in saying that larger works are necessary for the port. So far as I am concerned, I would be quite satisfied to see Sir John Coode's plans adopted.

11. Captain *Murison.*] What is your opinion with regard to silting up?—That is a question for professional men. Port Elizabeth has suffered much from amateur engineering, and I do not feel myself justified in giving an opinion. From information, however, received from engineers, I consider that there is no chance of silting up beyond a certain distance from the shore, say beyond the 24 feet line of soundings.

12. But what is your own opinion, from your experience? You have seen the action of the sand on the beach?—My own opinion is that if we had Sir John Coode's plan carried out we should have deep water up to the beach.

13. Could you give us some reason why you have that opinion?—It has been found that where there is solid work run out from the shore it occasions an accumulation of sand; and that was the reason that the old breakwater, being filled up with stone, proved a failure. But engineers are of opinion that the viaduct proposed to be run out to the large breakwater, being very open below, would not cause obstruction, and there would be no accumulation of sand; and I quite concur in that opinion.

14. What, in your opinion, was the cause of the accumulation of sand outside the shield, where there was no obstruction?—The breakwater and shield having been filled up with stone caused the sand to deposit, and the line of beach gradually shifted out into a line with the seaward face of the shield.

15. Do you remember what depth of water was there

before that obstruction?—I think about 25 or 26 feet. *Mr. W. Hume.*
I have seen four or five ships lying inside the shield. June 9, 1880

16. What has been the effect of removing the stone from that breakwater?—A large quantity of the sand has been washed away.

17. Can you give us the increased depth since the obstruction was removed?—I cannot give you the figures; but I know that the depth has increased considerably, and a large quantity of sand has been washed away. My opinion is that if all the old piles and stones were removed the original line of the beach would be restored.

18. Supposing this plan were carried out, what is your opinion of the outer breakwater sanding up?—I don't believe there would be any accumulation of sand there.

19. Why?—Because it is beyond the travel of the sand.

20. But you are aware that the sea rolls in from the south-east all the year round?—Yes, but that does not disturb the sand at that depth, or beyond a certain line of soundings. I have formed my opinion on the soundings given by the engineers for a series of years.

21. Don't you think an isolated work, like Plymouth Breakwater, would be less likely to be obstructed with sand than Sir John Coode's plan at present before us?—There is no doubt it is less likely to obstruct the sand, but we want a work to facilitate the landing and shipping of goods and passengers, and not merely for the protection of ships. The obstruction caused by the viaduct would be so small as not to be worth consideration against the great advantage of connecting the breakwater with the shore.

22. But do you not think that having an isolated breakwater would materially facilitate the landing of goods?—It would to some extent, but not to the extent which we think is required. What is required is that goods can be taken out of a ship's hold and placed upon a quay without the intervention of beats.

23. In fact you want a dock?—Yes, that is what is really wanted; but we are told that docks cannot be successfully made at Port Elizabeth, so we must be contented with the next best thing.

Mr. W. Hume.] 24. Mr. *Hudson*.] In the event of the breakwater being isolated, and no viaduct being constructed, would that breakwater protect jetties B and C?—No. In case of the breakwater being alone constructed it would be necessary to construct jetties elsewhere, or to construct the breakwater much more to the southward.

June 9, 1880.
Mr. *De Smidt*.] Supposing the breakwater were not constructed at all, would these jetties be efficient for the landing and shipping of goods?—Of course, in fine weather, they would undoubtedly help us very much, but not to the extent we require. I may say that if the proposed jetty B had been carried out on the line of the viaduct, as recommended by the resident engineer, Mr. Shield, there would have been no objection to it on the part of the inhabitants, as a temporary measure.

26. *Chairman*.] Is there any further remark you wish to make for the information of the Committee?—I would mention that it has been suggested, and the suggestion is favourably received by most people, that instead of Sir John Hawkshaw being asked to come out here, a commission might be appointed to sit in London, consisting of Sir John Coode and Sir John Hawkshaw, with some other eminent engineers, to consider what is best to be done for Algoa Bay, and if they agree, or if any two of them agree, to recommend some scheme that should settle the matter finally as to what is best to be done.

27. Captain *Murison*.] Is it really your opinion that two or three gentlemen who have never seen Port Elizabeth, or the sands there, can give a better opinion of what is required for the protection of the shipping in Algoa Bay than the engineers we have in the Colony?—Sir John Coode has seen Algoa Bay. The commission sitting in London would have all the information already collected, and if they wanted more on any point, they could send out a competent man, or employ some engineer already in the Colony to supply it. I believe the information at present available in Sir John Coode's office is quite sufficient to enable such men to come to a correct conclusion.

Thursday, 10th June, 1880.

PRESENT :

MR. GEARD (Chairman),

Mr. Hutton, | Mr. Murison.
,, Hudson, |

Mr. *James Lamb* examined.

28. *Chairman.*] You are a merchant residing at Port *Mr. J. Lamb.* Elizabeth, and have resided there some time?—Yes. *June 10, 1880.*

29. How long?—Seven years.

30. And you are a member of the committee of the Chamber of Commerce of Port Elizabeth?—I was a member of the committee five or six years, and was vice-chairman last year.

31. You are well acquainted with the import and export trade of the port as regards the landing and shipping of cargo, and the landing and embarking of passengers?—Yes; I have seen a good deal of it.

32. Do you think the present facilities meet the requirements of the port?—I do not. They are very deficient indeed.

33. Do they lead to much delay in the landing and shipping of goods?—Yes; especially in south-easters, when the work is brought to a stand-still. I may add that passengers are often landed and shipped to steamers at great risk of their lives, and with great inconvenience at all times.

34. You are aware, Mr. Lamb, that some years ago a considerable amount of money was spent in carrying out a wooden pile pier, and shield, which was filled in with stones. Can you tell the Committee the effect of that upon the beach, and upon the landing and shipping of goods?—Yes. In the first place the sand has accumulated to an enormous extent since that work was done, as will be seen by the chart here (plan No. 2), and the expense has been largely increased by the greater distance that goods have to be brought to the

Mr. J. Lamb. landing company's stores. It has had the effect of entirely shallowing the beach, and large banks of sand are seen which were never known there before.
June 10, 1880.

35. Are you aware that that impediment has been partially removed?—Yes, and the water has been much deepened by it. I may state that about two months ago we had a severe gale—I think from the south-west. I recollect it occurred on a Saturday night, and on the Sunday morning I went down myself to the beach and found that all in front of the Boating Company's stores the sand had been removed to the depth, I should say, of from four to six feet, and the water had been higher during the night than ever I had seen it during my seven years' residence there.

36. And you attribute this to the removal of the pier and shield?—Yes. It was partly caused by the construction of the retaining wall and the removal of the pier and shield.

37. You are aware that Sir John Coode has been consulted and has submitted a plan for the improvement of the port?—I am.

38. And that the Government have declined to adopt that plan and authorized the construction of jetties instead?—Yes.

39. Are you of opinion that these jetties will meet the requirements of the port?—I am of opinion that they will not.

40. You are aware that the Harbour Board has recommended to the Government certain sites on which to erect those jetties?—I believe they have, but I am not fully acquainted with that.

41. You are of opinion that something more is required than jetties: would you tell us what you think ought to be done?—I am strongly in favour of Sir John Coode's plan, or works of a similar nature. I believe that jetties are altogether inadequate, even now, for the trade of the place, and as that trade is constantly increasing of course every year, they will become more inadequate, and the trade will ultimately necessitate the construction of Sir John Coode's plan, or something similar, sooner or later.

42. Then you think that some such works as those

recommended by Sir John Coode should be immediately undertaken?—I do.

Mr. J. Lamb.
June 10, 1850.

43. Captain *Murison.*] When that gale of wind occurred, when you went down that Sunday morning, was there a heavy sea on?—No, the sea was not then very heavy, but apparently had been during the night.

44. Have you ever, in any instance, seen the sea flying over the top of the jetty or the shield?—Yes, I have seen the spray flying over the extreme end of the shield.

45. Have you any doubts in your mind of the viaduct proposed by Sir John Coode causing an accumulation of sand?—I have no doubt. I don't believe that there will be an accumulation of sand, because I believe there will be a sufficient scour to keep the viaduct perfectly clear.

46. Now, is it your opinion that cargo can be discharged in all weathers if Sir John Coode's plan were carried out?—My opinion is that work could then be carried on in all weathers.

47. Do you think the public of Algoa Bay would be satisfied with the one jetty, A, until Sir John Coode's plan is carried out, or something similar, if the Government take that work in hand at once?—I do believe that if the Government (it all rests there) take Sir John Coode's plan, or something similar, in hand at once, the public would be well satisfied with the one jetty in the meantime. I have no doubt of that whatever; I am sure they would.

48. Mr. *Hudson.*] Your great object is to have the goods landed direct on to the quay without the intervention of boats?—Yes; that is the wish and great object of the people in Port Elizabeth.

49. Do I understand from the evidence you have given that, whether the construction of the larger works suggested by Sir John Coode, or similar works be proceeded with or not, the extension of jetty A., now in course of construction, should be proceeded with?—Decidedly so.

50. *Chairman.*] You are aware that large numbers of passengers come from all parts of the Colony to embark at the port of Port Elizabeth, and a large number of arrivals there are constantly taking place?—Yes.

51. Is there not great inconvenience and considerable

Mr. *J. Lamb.* risk in embarking and landing these passengers?—There June 10, 1880. is great inconvenience, risk, and danger.

52. Do you not consider that the population of the Eastern Province generally, and all parts of the Colony trading with the port, are as much interested in this matter as the people of Port Elizabeth themselves?—Undoubtedly.

Friday, 12th June, 1880.

PRESENT :

MR. GEARD (Chairman),

Mr. Ebden,	Mr. Hudson,
„ Murison,	„ Hutton.
„ De Smidt,	

Mr. *A. T. Andrews* examined.

A. T. Andrews. —
Mr. *A. T. Andrews.* —
53. *Chairman.*] I believe you are a marine engineer?

June 12, 1880. 54. You had charge of the construction of Table Bay harbour works?—Yes, from the commencement till the time they were opened, a period of about eleven years.

55. You were employed to carry out the plans of Sir John Coode?—I was.

56. And those works have been a very great success?—I understand so.

57. Have you visited Algoa Bay?—The last year or year and a half I was at the Cape I had charge of the works at Algoa Bay, and visited them and reported upon them about every three months.

58. What was the nature of the work carried on at that time?—The removal of the breakwater and the construction of the wooden jetty at the foot of Jetty-street. I also visited them and reported on them in 1862.

59. What was the nature of the work carried on at that time?—The construction of the breakwater and shield.

60. Who was in charge of the works at the time?— *A. T. Andrew's*
 Mr. Warren.

^{Mr.}
A. T. Andrew's
 June 12, 1880.

61. Do you know at whose request you went round?—I believe at the request of the Harbour Board, through the Government.

62. The breakwater and shield were then under construction?—Yes.

63. Do you remember on what special part of the work you were requested to report?—On the filling in with stone,

64. Do you remember what you advised?—That the stone filling in of the breakwater should not be proceeded with.

65. Was that in reference to the shield as well?—Looking at my report, I find I raised no objection to the filling in of the shield.

66. Do you remember the effect of that filling in?—To cause the sanding up of that portion of the beach.

67. Do you know whether your advice was acted upon?—It was not.

68. And the effect of the filling in was to cause the sanding up of a portion of the beach, as you predicted?—Yes.

69. You have visited Algoa Bay since, have you not?—I was there a few weeks ago.

70. Did you notice any change either for better or worse?—The works I commenced in 1870 had caused a change in the deepening, which has been in progress ever since.

71. The work you refer to was the removal of the stone from the breakwater?—The removal of the breakwater entirely.

72. Has the jetty which you were employed in the construction of in 1870 been carried out?—Yes. An iron jetty is now being substituted for the wooden one.

73. You are acquainted with the plan proposed by Sir John Coode?—I have seen the plan, and I saw a model of it in Algoa Bay.

74. Are you disposed to give the committee your opinion of the suitability of those plans?—It would be impossible to give an opinion off hand without a thorough examination of the plan and site.

Mr.
A. T. Andrews.
June 12, 1880.

75. Knowing something of the trade of Port Elizabeth, and having seen it lately, are you of opinion that something more should be done for the trade of the port?—Most certainly.

76. You know the way in which goods are landed and shipped there. Do you consider that the best style of doing such work?—It is the most primitive and laborious that can be imagined.

77. You also know that passengers are put to great inconvenience?—I know it by personal experience.

78. Would you be disposed to give the Committee your opinion as to the best way of meeting the difficulty?—I would suggest that all the plans and evidence of every sort should be forwarded to the Agents General, to be by them submitted to two or three engineers of reputation in England, who could take any further evidence they required from persons acquainted with the port, and who would then be enabled to report to Government on the whole question. I would give my evidence before such gentlemen with great pleasure.

79. Do you think it would assist you if you should pay a special visit to Algoa Bay?—I don't think that is required: not such a hurried visit as I should have to give.

80. Then at present you decline to give the Committee any opinion either as to Sir John Coode's plan or as to the construction of jetties?—I am not in a position to give an opinion.

81. Mr. *Hutton.*] Would there be anything unprofessional in the Government asking Sir John Coode to submit his plans to other engineers for their report?—In my opinion there would be nothing unprofessional about it. It is a course frequently pursued.

82. Could you yourself suggest the names of any eminent engineers at home acquainted with such works whom it would be advisable to consult?—I might mention the names of Sir John Hawkshaw, Rendle, and Mr. Brunlees.

83. Mr. *De Smidt.*] You said you lately visited the works at Port Elizabeth?—Yes.

84. On whose plan are those works being carried on?—I presume on that of Sir John Coode.

85. As far as you know, do you think it expedient to carry on any works besides those which Sir John Coode has proposed before we know the result of the commission which you have suggested?—I do not see why one or more jetties should not be constructed. It would be some years before the permanent works would be available, and in the meantime such jetties might be utilised to a great extent.

86. You have said in the course of your evidence that you recommended that the filling of the old pier with stones should not be proceeded with, and that it was not listened to. At whose instance was that?—I believe the Harbour Board of Port Elizabeth, but I cannot say by whose advice.

87. Mr. *Hudson.*] You have said that one or more jetties might be carried out. Could you recommend any particular site?—I could not without an examination of the shore, and taking some evidence on the subject.

88. Mr. *Ebden.*] You know Mr. Neate?—Yes. He is a civil engineer, and was sent out some years ago to collect some information about the different coast ports.

89. Mr. Neate is now in England?—He is practising, I believe, in London.

90. And his evidence would be available?—I think so.

91. Then you said it would be necessary to send home copies of plans, &c. Would it not be advisable if Sir John Coode were first asked by the Government to furnish his own plans for the guidance of the engineers to be consulted?—Sir John Coode might be asked to furnish copies of any plans. If they were original designs I think he might object, but I do not think he would object to furnish any such plans and documents as are not entirely of a private nature.

92. How long are you likely to remain in the Colony?—I leave for England on Tuesday next.

*Mr.
A. T. Andrews.
June 12, 1880.*

Tuesday, 15th June, 1880.

PRESENT :

Mr. GEARD (Chairman),

Mr. Hutton,
,, Hudson,

Mr. Ebden,
,, De Smidt.

Mr. *James Somers Kirkwood* examined.

Mr. J.S. Kirkwood. 93. *Chairman.*] You have been many years a resident June 15, 1880. at Port Elizabeth?—Yes, many years.

94. You are also a member of the Chamber of Commerce, a member of the Harbour Board, and a member of the House of Assembly?—Yes.

95. You are acquainted with the way of landing and shipping goods at Port Elizabeth, and also the way of embarking and landing passengers?—Yes.

96. Do you think that the present appliances for these purposes are equal to the requirements of the port?—By no means.

97. You know that the landing and shipping of goods is attended with considerable delay and risk?—Yes, and for passengers also.

98. You remember that, some years ago, a break-water and shield were constructed for the improvement of the port?—Yes.

99. Can you tell us whether that work answered the purpose?—No, it failed entirely.

100. Can you tell the Committee the effect of that work on the landing-place?—The effect has been to cause the sand to silt up the whole of the distance between the shield and the shore, thereby increasing the distance from the beach to the storage.

101. Can you account for that fact in any way?—It was accounted for by their filling up of the viaduct between the piles with stones, which was done against the recommendation of the visiting engineer, Mr. Andrews.

102. At whose recommendation was that done?—

The board had an engineer, or a gentleman who held the position of their engineer, Mr. Warren, on whose recommendation I presume they acted.

Mr.
J.S. Kirkwood,
June 15, 1880.

103. You are aware that Sir John Coode was consulted on the matter, and he recommended the removal of the breakwater and shield and the construction of a retaining wall?—Yes, about five years ago.

104. Has that recommendation been carried out?—It has.

105. And what has been the effect?—It has considerably increased the depth of water at the landing jetty.

106. You are also aware that Sir John Coode has since been consulted about further improvements of the port?—Yes; in fact, he paid a visit to the port about four years ago—in 1876.

107. You are aware, too, that the Harbour Board have recommended the carrying out of that plan?—Yes.

108. Has that been done?—No.

109. Do you know why?—The Government declined the responsibility of so large an expenditure for works which there appeared no precedent for, and the carrying out of which would require very great consideration; but at the same time they offered to construct an iron jetty, and £27,000 was voted by Parliament for that purpose.

110. Has that jetty been constructed?—That jetty is now being constructed (jetty A), but at the same time the Government did not abandon Sir John Coode's plan altogether. They required time for consideration.

111. Upon whose design is that jetty A. being constructed?—I presume upon a plan approved by Sir John Coode.

112. Do you think that the construction of that jetty will give sufficient appliances for the requirements of the ports?—No, quite insufficient.

113. Has there been any proposal to construct more jetties?—Yes; jetty A was first authorised, and jetty A is now being constructed. Twelve months afterwards the landing and shipping of passengers being positively dangerous as well as difficult, the Government were again requested by the representatives of Port Elizabeth to state as to whether they were prepared to carry out

J.S. Kirkwood.
June 15, 1880.

Sir John Coode's plan, as the port was in such a disgraceful state that, should the Government not feel so prepared, something else must be done for the immediate and urgent requirements of the port. The Government then said that they were not prepared to carry out Sir John Coode's plan, but for the immediate requirements of the port they were prepared to place upon the estimates a sum for the construction of further jetty accommodation, and £100,000 was voted accordingly.

114. Has that accommodation been provided?—A plan has been submitted to Sir John Coode for his approval, for the construction of a further jetty (B), and at the same time we were informed by the Government that they had ordered the piles for the jetty, and unless he (Sir John Coode) had the very gravest objection to it he was to send out the piles immediately. Sir John Coode entirely disapproved of the construction of jetty B as interfering with the construction of the outworks according to his own plan, and he said that it was inexpedient to construct jetty B, unless his plan was to be for all time abandoned.

115. Are you of opinion that the construction of any number of jetties would meet all the requirements of the port?—It is the opinion of a great number that the system of jetties would meet the requirements of the port for some time to come.

116. Do you concur in that opinion?—A system of jetties, with steam tugs and steam cranes, might be serviceable for a time.

117. *Mr. Ebden.*] That would give no protection to shipping?—No, nor give quay accommodation or deep sea berthing for vessels.

118. *Chairman.*] Nor would it be a very great improvement upon the present mode of embarking and landing passengers?—No; but with steam tugs and steam cranes the landing and shipping of goods would be much facilitated.

119. You are aware of the great number of passengers that come to Port Elizabeth?—Oh, yes; it is sometimes very inconvenient indeed for passengers.

120. And the construction of jetties would not remove

that difficulty?—No, excepting in so far as the jetties would take the passengers into deeper water, beyond the surf, and be safer. Still it would be inconvenient.

*Mr.
J.S. Kirkwood.*
—
June 15, 1880.

121. You know that many of the passengers who come down to Port Elizabeth are tied to a particular time in order to catch the mail steamers?—Yes.

122. Mr. *De Smidt.*] The moneys that were voted for the jetties, the £27,000 for jetty A,—has that been appropriated for that purpose?—It is not being appropriated. About two years after the money was voted the piles began to arrive. But nothing has been yet appropriated of the second vote of £100,000, owing to Sir John Coode's disapproval of the jetty, though a small sum has been spent in building a bridge over the Baaken's River, which, though portion of his own plan, he has also disapproved of for the present.

123. Then the balance is still available?—Yes.

124. Mr. *Ebden.*] The result is that the people of Port Elizabeth have asked the Government to send out Sir John Hawkshaw at their expense?—Yes.

125. You have heard of a proposal that has since been made to appoint a commission to sit in London to consider Sir John Coode's plan? Do you think that such a plan would answer the purpose intended?—I do. It is entirely at one with my own view of what should be done.

126. *Chairman.*] I understand then from you that, although you think jetties would suffice for the present, yet you are of opinion that larger harbour works are required, and should be undertaken?—Yes.

Wednesday, 16th June, 1880.

PRESENT :

Mr. GEARD (Chairman),

Mr. De Smidt,	Mr. Ebden,
„ Murison,	„ Hudson.

Mr. *Joseph Walker* examined.

127. *Chairman.*] You have been many years a resident at Port Elizabeth?—Yes, I have been living there about seven years.

Mr. Joseph Walker. June 16, 1880. 128. And you are, I believe, a member of the Harbour Board?—I have been for five years.

129. You are also a member of the House of Assembly?—Yes.

130. You are also one of the directors of the Eastern Province Boating Company?—I am.

131. You have had many opportunities, in that capacity especially, of judging of the facilities for landing and shipping there?—Yes, I am pretty well acquainted with the conditions of the port.

132. Do you think the facilities for landing and shipping goods are adequate to the requirements of the port?—They are rather primitive, certainly; but I believe we can work with greater dispatch in Port Elizabeth than you sometimes do with all your dock facilities in Table Bay.

133. But, notwithstanding, you admit that the present system is attended with considerable risk and delay?—Yes. If you can suggest anything that would answer better in Algoa Bay, it would be an advantage.

134. The landing and shipping of passengers is also attended with considerable inconvenience and risk?—Occasionally. But I don't think the same difficulty will exist when the contemplated extension of jetty A is completed.

135. You remember that, some years ago, a breakwater and shield were constructed for the purpose of improving the port?—Yes, they were erected before my time.

136. You know something of the effect of that work on the beach?—Yes.

Mr.
Joseph Watker.

June 16, 1880.

137. Was it beneficial, or otherwise?—It was prejudicial, as carried out.

138. Will you say in what way it was prejudicial?—It increased the foreshore, owing to the filling up of the breakwater with stones, and occasioned an accumulation of sand along the beach.

139. Are you aware that Sir John Coode recommended the removal of that work?—I do not know if it was at his recommendation, but it has been removed in part.

140. And can you tell the Committee the effect of that removal?—As far as it has gone it seems to have created a scour along the beach; but I could not say what the permanent effect may be, because of the fluctuations caused by different winds and seas.

141. Do you know that Sir John Coode visited the port at the request of the Harbour Board?—Yes.

142. And that subsequent to his visit he recommended certain plans?—Yes.

143. And that the Harbour Board recommended their adoption, involving the expenditure of a million of money?—Yes.

144. Do you know whether any steps have been taken to carry out those plans?—I believe not. The Government have declined to carry them out.

145. Do you know whether the Government have recommended anything in place of them?—I cannot say in place of them, but they have recommended the construction of jetties to suit the present requirements of the port.

146. When you say they recommended, what do you intend to convey? Were they acting on any scientific opinion?—I do not know.

147. Did the Harbour Board adopt this suggestion?—Yes. A loan was authorized by Parliament of £100,000 for that purpose, and evidence was taken by the Harbour Board as to the most suitable sites; and the Harbour Board decided in accordance with that evidence.

148. The commission you refer to has reference only to the sites of jetties?—Yes.

Mr. Walker. 149. Has anything been done to carry out that report?—Yes. Inspections have been made, and plans and specifications drawn out and sent to Sir John Coode, with an indent for the materials.

June 16, 1880. 150. Do you know whether Sir John Coode approved of it?—I believe not. He objected to the construction of jetty B as likely to interfere with his plans.

151. *Mr. De Smit.*] Did he say anything of jetty A?—No, I believe he approved of that part of the plan.

152. Then nothing whatever has been done with regard to jetty B?—There has been no commencement made.

153. Are you of opinion that jetty B should be constructed?—I think so.

154. In the face of the opinion of Sir John Coode?—Yes.

155. *Mr. Ebden.*] Then I presume that you are not in favour of the general plans of Sir John Coode?—No, I am not; Not in their present form.

156. Will you give us your reasons for that opinion?—I may state that when those plans first came out, like many others, I was much taken with them, and thought them quite suitable for the port; but, being one of the Harbour Commissioners, I thought it necessary to gain information from practical men acquainted with the condition of the port, and nautical men who would have to use it, and I found that there was room for serious objections. The first objection I would mention, as stated by these men, is that no large steamer would ever be able to lie alongside these jetties, for the simple reason that the water would never be quiet, as in a dock; that when it is at all stormy the very insides of the ships would be torn out of them by the great undulations of the water, and that this work, which is to cost a million of money, would really afford protection to only about two ships at most. Another consideration was that, as contemplated, the expense of landing goods would even be greater than with the present means. Another serious objection was that the construction of that viaduct would be endangered by ships that had parted running into it. And another reason was, that supposing the works did not succeed, it would destroy

our berthage for the large steamers. I may state that of the nautical men whom I have examined on the matter I found hardly two who agreed with the plan.

Mr. Joseph Walker.
June 16, 1880.

157. Mr. *Ebden.*] Does the Harbour Master, Mr. Skead, agree with them?—I believe he goes much further.

158. You have given us the opinions of others, will you now give us your own opinions?—I gave them as the conclusions I arrived at after gaining information from those men I have alluded to.

159. Mr. *De Smidt.*] Do you allude to the first plans of Sir John Coode, in 1870, before he visited the Colony?—Those plans were entirely abandoned by Sir John Coode himself. I allude to his last plans of 1877.

160. Then the objections you speak of have never been brought to Sir John's knowledge?—I do not know that they have. I have no recollection.

161. You have no reason to suppose that those nautical men you speak of are interested persons?—I am sure they are not.

162. *Chairman.*] Where do the large vessels generally anchor?—The large steamers anchor eastward of the proposed breakwater.

163. In what water?—I think in about six fathoms.

164. And what distance is that from the beach?—I could not say exactly. I should say about three-quarters of a mile from the shore.

165. And the sailing vessels generally, where do they anchor?—A little closer in, and to the northward.

166. When vessels are wrecked in Algoa Bay, in what direction generally do they come to the shore?—They come to the bight of the bay, which is northward and westward.

167. Do you think there is much reason, seeing that the anchorage is to the northward of the proposed breakwater, to apprehend that there is danger of this injuring the proposed viaduct?—There are three or four distinct cases on record of vessels parting and driving right through the site of the contemplated viaduct.

168. Mr. *Hudson.*] Can you mention in what direction the wind was on these occasions?—I presume it was from the north, but it was many years ago. I don't know of any in my time.

Mr.
Joseph Walker.
—
June 16, 1880.

169. *Chairman.*] Perhaps you remember that in former times the ships anchored much more to the south than they do now?—I don't know anything about that.

170. What wind endangers vessels lying there?—The prevailing winds in bad weather are from the south-east and north-west.

171. Did you ever know of a vessel being wrecked with a north-west wind?—I cannot say of my own knowledge. I should say the effect would be to drive a vessel out to sea, but now I would say a north-west wind would jeopardise a ship by driving it on the proposed breakwater.

172. Captain *Murison.*] In your own opinion, what should be done. Have you thought of anything that would be an improvement on Sir John Coode's plan?—I think something ought to be done for the protection of ships and the shipping and landing of cargo and passengers, but I do not know what to suggest.

173. Mr. *De Smidt.*] Then you think that the opinions of practical and nautical men should be taken before anything can be finally decided upon?—I will say that I have always been in favour of a commission being appointed to take evidence and report upon Sir John Coode's plan, and I think if experienced nautical men, who trade to the port, were examined, a large amount of information might be collected which would lead to the adoption of a plan that would meet all the wants of the port for the protection of ships and the dispatch of passengers and cargo.

174. *Chairman.*] And do you think that the trade of the port justifies the construction of large harbour works?—Most certainly.

175. Even if they should cost a million of money?—Yes, if they cost two millions; considering the central position of Algoa Bay, and the large and increasing trade which that port must always command.

176. Captain *Murison.*] Don't you think, now (having got to two millions), that an isolated breakwater like Plymouth breakwater, open at both ends, would suit the purpose better than Sir John Coode's plan?—I feel diffident in suggesting anything, but that is entirely my own opinion, because I think it would never silt up;

but it would furnish complete protection to the shipping and boats. Mr. Joseph Walker.

177. *Chairman.*] But in that case boats or lighters would still have to be employed in landing and shipping cargo and passengers?—Yes; but under such circumstances boats could work almost at all times, which could not possibly be the case with Sir John Coode's breakwater. June 16, 1880.

178. *Captain Murison.*] Do you think it would be possible to land and ship cargo at this viaduct proposed by Sir John Coode in a south-east gale?—At the viaduct it would be utterly impossible, but I do not think there would be any difficulty if the goods were once put on the breakwater. But I think it would not be possible to land goods on the breakwater in a south-east gale.

179. You have spoken of extraordinary wrecks taking place. Would there not be considerable danger in ships coming in at night running against the proposed breakwater of Sir John Coode?—That might be.

180. *Mr. De Smidt.*] Might not that be obviated by placing a lighthouse, with a first-class light, on the end of the breakwater?—I dare say it could; but, seeing the ease with which accidents occur, it is a matter to be considered.

181. You are aware that before there was any plan of Sir John Coode's, or any other submitted, there have been large sums expended for the improvement of Algoa Bay?—There was money spent, but I think there is great misapprehension as to the amount. I think £300,000 was voted, but a large proportion of that has not been expended, or was not expended, on any plans of scientific or nautical men.

182. *Chairman.*] Is there any further remark you would wish to make to the Committee?—I would wish to say, with reference to my remark about insisting on the construction of B jetty, notwithstanding Sir John Coode's disapproval, I only went upon the lines laid down by himself in his former plan, wherein he proposed to construct a jetty within a certain distance from A jetty, and as jetty B would be quite as distant from his proposed viaduct as A jetty would have been from the next jetty, I cannot conceive that it would be injurious in the one case without being injurious in the other.

APPENDIX.

[1.]

PETITION FROM PORT ELIZABETH ON HARBOUR IMPROVEMENT.

To the Honourable the President and Members of the Legislative Council of the Cape of Good Hope.

The Petition of the undersigned Merchants, Ratepayers, and other Residents, in the Town of Port Elizabeth,

HUMBLY SHEWETH,—

That your Petitioners have been informed that notwithstanding your Honourable House sanctioned the preparation of plans for the improvement of the Harbour of Port Elizabeth by Sir John Coode, the Honourable the Commissioner of Crown Lands and Public Works has expressed his intention not to proceed therewith at present, but has, on the contrary, sanctioned plans for the construction of jetties, which plans have been condemned by Sir John Coode as inconsistent with the general scheme of the works designed by him, and that consequently there is every probability of all attempts to improve the facilities for landing or shipping passengers and goods at the port being suspended for a time.

Your Petitioners earnestly desire that your Honourable House will take the subject into early and serious consideration, in order that the larger works recommended by Sir John Coode may be commenced forthwith, or that further enquiry may be made, and the opinions of such other engineers obtained as may enable your Honourable House to resolve on the adoption of an improved design for the works so urgently required in the harbour where so large a proportion of the trade of the Colony is carried on.

Your Petitioners desire further to inform your Honourable House that, on its becoming known that the Chamber of Commerce of Port Elizabeth had recommended that Sir John Hawkshaw or other eminent engineer should be consulted, and that the Harbour Board had, on being informed by the Chamber of that determination, resolved to suggest to the Government that a commission be issued to inquire and report.

A public meeting was convened, whereat resolutions were passed as follows:—

1. "That in view of the fact that the bulk of the trade of the eastern province passes through this port, and of its large contributions to the general revenue through the Customs, the apparent unwillingness of the Government to further any adequate scheme for the improvement of the harbour is most unaccountable and unsatisfactory.

2. "That this meeting is of opinion that the trade requirements of this port will not be met by the construction of Jetties alone, but that larger works are absolutely necessary for the protection of vessels visiting the port, and in order that passengers and goods may be landed and shipped with safety in all weathers.
3. "That this meeting urges upon the Government, if it has not confidence in, or is unwilling for other reasons, to adopt the plans proposed by Sir John Coode, to take immediate steps to get the opinion of some other eminent engineer as to the best plan for improving the harbour.
4. "This meeting is of opinion that the commission recommended by the Harbour Board is unnecessary, and would simply lead to further delay in inaugurating the works so urgently required.
5. "That a copy of these resolutions be forwarded to the Honourable the Commissioner of Public Works, and that petitions be sent to both Houses of Parliament, praying that the views set forth in the foregoing resolutions may be favourably received and acted upon."

These resolutions your Petitioners humbly recommend to the consideration of your Honourable House, and they feel assured that it is not in accordance with the desire of the House that any avoidable delay should occur in works of such manifest importance, and are confident that your Honourable House will take immediate measures to ensure speedy execution of such plans as may be found most likely to serve so large a portion of the commerce of the Colony as that represented by your humble Petitioners.

And your Petitioners, as in duty bound, will ever pray.

(Signed) H. W. PEARSON
(and 510 others).

[2.]

RETURN showing the Number of Vessels that have entered the Port of Algoa Bay from the Year 1854 to the present year (1879), specifying the total Tonnage of such Vessels and the Annual Value of the goods and produce imported and exported during that time:—

Year.	Number of Vessels entered.	Tonnage.	Value of Goods Imported.	Value of Goods Exported.
			£	£
1854	139	27,776	555,729	451,750
1855	195	33,122	555,047	391,909
1856	210	45,118	45,138	759,747
1857	261	68,047	1,256,943	1,084,640
1858	256	76,849	836,626	991,355
1859	272	82,152	1,152,369	1,133,168
1860	291	64,576	1,207,498	1,324,447
1861	236	71,346	1,224,930	1,312,025
1862	263	71,538	1,265,043	1,233,096
1863	248	68,905	1,057,336	1,396,028
1864	273	86,784	1,460,164	1,913,251
1865	229	94,993	11,48,762	1,594,305
1866	255	103,829	958,746	1,854,611
1867	277	104,026	1,262,397	1,715,094
1868	248	101,971	929,440	1,566,000
1869	221	94,657	1,079,508	1,482,312
1870	222	99,404	1,214,254	1,903,988
1871	251	110,271	1,462,935	2,291,939
1872	291	150,729	2,447,280	3,167,920
1873	275	156,776	2,629,428	2,550,410
1874	299	166,479	2,500,886	2,889,085
1875	360	264,467	2,681,333	2,864,954
1876	373	328,822	2,416,691	2,248,304
1877	387	378,576	2,174,556	2,244,579
1878	431	471,279	2,489,277	2,125,004
1879	523	590,766	2,960,884	2,223,181

(Signed)

A. ORPEN,
Sub-Collector.

Custom-house, Port Elizabeth,

14th January, 1880.

C. 1—'80. PORT ELIZABETH.

[3.]

AMOUNT of CUSTOM and WHARFAGE DUES collected at Port Elizabeth for the Years 1874 to 1879, and General Summary of Trade, 1869 to 1879, extracted from Report of Chamber of Commerce, Port Elizabeth.

Custom Dues.

						£	s.	d.
1874	...	...	...	...	...	350,917	19	11
1875	...	...	...	...	...	351,277	6	10
1876	...	...	...	...	...	329,625	14	8
1877	...	...	...	...	...	302,304	7	4
1878	...	...	...	...	...	376,760	5	8
1879	...	...	...	...	...	429,714	0	10

Increase in 1879 over 1878 ... 52,953 15 2

Wharfage Dues.

						£	s.	d.
1874	...	...	...	...	...	11,810	19	5
1875	...	...	...	...	...	11,136	6	5
1876	...	...	...	...	...	10,270	19	11
1877	...	...	...	...	...	10,209	1	7
1878	...	...	...	...	...	12,063	0	3
1879	...	...	...	...	...	19,134	3	2

Increase 1879 over 1878 ... 7,071 2 11

GENERAL SUMMARY OF TRADE 1869 TO 1879.

		Customs Duties.	Imports.	Exports.
		£	£	£
Port Elizabeth	...	3,414,723	24,057,032	25,670,144
East London	...	671,637	5,353,787	1,375,921
Cape Town	...	2,471,648	19,442,249	7,674,552
Other Ports	...	372,527	2,791,368	473,830
All Ports	...	6,930,535	51,644,436	35,194,447
Port Elizabeth	...	3,414,723	24,057,032	25,670,144
All other Ports	...	3,515,812	27,587,404	9,524,303
Total	...	£6,930,535	£51,644,436	£35,194,447

Wool exported in the above period, 336,160,438 lbs. from Port Elizabeth.

All other Ports ... 97,896,525

Total ... 484,056,963 lbs.

[4.]

RETURN showing the Number of Passengers landed and embarked at No 1 Jetty in each Month of the Years 1879 and 1880.

			1879.		1880.	
			Landed.	Embarked.	Landed.	Embarked.
			NO.	NO.	NO.	NO.
January	...	...	180	316	549	313
February	...	...	220	421	499	313
March	...	...	318	352	479	294
April	...	..	398	287	365	435
May	...	...	382	446	335	395
June	...	...	272	320	...	...
July	...	...	242	298	...	...
August	...	...	204	348	...	...
September	...	...	316	227	...	...
October	...	...	538	403	...	...
November	...	...	482	312	...	...
December	...	...	469	371	...	...
Total	...	...	4,011	4,101	2,227	1,750

NELSON GIRDLESTONE,
Secretary, Harbour Commission.

Port Elizabeth, 7th June, 1880.

[5.]

RETURN showing the Total Number of Vessels Wrecked at the Port of Algoa Bay from the Year 1854 to the present year (1879), the tonnage of the same, (2) and the Total Number of Lives Lost during that period, either by wrecking of vessels or in landing of goods or passengers.

YEAR.	Total Number of Vessels Wrecked.	Tonnage.	Lives Lost.	REMARKS.
1854	3	976	113 (i)	(i) Troops and Crew of ship <i>Charlotte</i> .
1855	...	...	...
1856	...	...	...
1857	1	186	...	
1858	...		...
1859	7	1,500	1	
1860	1	424	...	
1861	2	627	...	
1862	1 (ii)	570	...	(ii) Took fire at the anchorage and beached near to the <i>Don Pedro</i> wreck.
1863	...	...	...
1864	2	831	3 (iii)	(iii) Port boatmen.
1865	...	...	...
1866	2	504	1	
1867	2 (iv)	1,077	...	(iv) The <i>Balaclava</i> struck on Roman Rock and sunk at the anchorage.
1868	...	...	...
1869	12	3,660	7	
1870	1	100	...	
1871	2 (v)	1,333	...	(v) The <i>Gambia</i> 's screw got foul, and she drifted on shore in fine weather.
1872	5	1,520	...	
1873	...	...	...
1874	2	911	...	
1875	2	199	...	
1876	1	593	...	
1877	2	497	...	
1878	2	887	...	
1879	...	...	...
...	50	16,395	125	

(Signed)

F. SKEAD,
Harbour Master.

Port Office, Port Elizabeth,
25th March, 1880.

[6.]

RETURN showing the Amount of Government Grants or of Loans raised for the Improvement of the Port of Algoa Bay, and the Amount actually expended on that work from 1854 to 1879.

YEAR.	Amount of Government Grants and Loans raised for the Improvement of the Port of Algoa Bay.	Amount actually expended.
1854	Nil	
1855	Nil	
1856	Nil	
1857	Nil	
1858	£20,500—Act No. 10 of 1858	
1859	Nil	
1860	Nil	
1861	Nil	
1862	£29,500—Act No. 17 of 1862	
1863	Nil	
1864	£29,000—Act No. 24 of 1864	
1865	Nil	
1866	Nil	Expended (£179,000).
1867	Nil	
1868	Nil	
1869	Nil	
1870	Nil	
1871	Nil	
1872	Nil	
1873	Nil	
1874	Nil	
1875	£100,000 Act No. 25 of 1875	
1876	Nil	
1877	Nil	
1878	£67,000—Act No. 17 of 1878	
1879	£100,000—Act No. 14 of 1879	Authorized but not yet raised (£167,000).
...	£346,000	

Custom-house, Port Elizabeth,
14th January, 1880.

(Signed)

A. ORPEN,
Sub-Collector.

[7.]

PRECIS OF CORRESPONDENCE

Office of the Commissioners for Improving the
Port and Harbour of Algoa Bay,
Port Elizabeth, 25th May, 1880.

PRECIS of CORRESPONDENCE between the Commissioner for Improving the Port and Harbour of Algoa Bay and the Hon'ble Commissioner of Public Works, &c., on the subject of Harbour Improvements from the date of deciding to invite Sir John Coode, C.E., to inspect the Port (Nov., 1875) to the present time.

November 2, 1875.—The Harbour Board recommended to Government that Sir John Coode should visit this port, and report the improvements necessary.

January 25, 1876.—The Government stated that Sir John Coode would visit the Colony in November or December.

December 9, 1876.—Sir John Coode arrived at Port Elizabeth.

February 21, 1877.—Sir John Coode left Port Elizabeth on his way to England, stating that he would make his report on this harbour through the Commissioner of Public Works.

November 13, 1877.—The Commissioner of Public Works forwarded for the consideration of the board Sir John Coode's proposals for the improvement of this harbour, at an estimated cost of about £1,000,000, which was referred to a sub-committee of the board.

April 9, 1878.—The board adopted the report brought up by the sub-committee, and requested the Government to take the necessary measures in Parliament to *carry into effect Sir John Coode's proposal*, and pointing out the mode in which the interest on the proposed outlay of £1,000,000 could be met locally.

May 7, 1878.—The Commissioner of Public Works replied that Government would not be justified in recommending to Parliament the expenditure of £1,000,000 on Port Elizabeth harbour works, but sanctioned the construction of a new iron jetty.

May 14, 1878.—The board informed the Commissioner of Public Works that they were not prepared for the view taken by the Government, but trusted that his letter intended only to convey the decision of Government to defer the consideration of the subject for the present.

August 20, 1878.—Commissioner of Public Works stated that Government had deferred the question of Sir John Coode's proposals for harbour improvements at Port Elizabeth for future consideration.

July 26, 1879.—The Commissioner of Public Works stated that, after full consideration of the subject, Government do not deem it expedient to carry out Sir John Coode's plans, but is under the impression that a system of jetties would be sufficient

to meet the present wants of the port, and if the board will propose the number and cost of such jetties, a bill will at once be brought before Parliament to raise the necessary funds.

August 7, 1879.—The board replied, proposing to insert the sum of £100,000 in the bill this session for jetties.

(11th September, 1879, Bill passed)

September 22, 1879.—The Commissioner of Public Works met the Harbour Board at Port Elizabeth to discuss the question of the new jetties.

Arranged that board should resolve itself into committee.

September 23, 1879.—The board resolved itself into committee to take evidence of persons of experience as to the sites of the proposed new jetties.

November 27, 1879.—The board forwarded to the Commissioner of Public Works their report and minutes of evidence on jetties, dated 12th November, 1879, and recommended the further extension of No. 1 jetty by 200 feet, the construction of B jetty and new iron bridge over the Baaken's River.

December 30, 1879.—The Commissioner of Public Works approved the recommendations of the board, and stated that the proposals had been forwarded to Sir John Coode, intimating to him that *Government had decided to adopt the board's recommendations, unless he had the gravest objections.*

The board was also directed to take preliminary steps immediately.

January 2, 1880.—In accordance with the Commissioner of Public Works' letter, 30th December, 1879, instructions were given to the resident engineer to take all preliminary steps for the execution of the works approved, and indents were prepared and forwarded for the materials required from England.

April 24, 1880.—The Commissioner of Public Works forwarded a letter, dated 26th February, 1880, from Sir John Coode, disapproving of the B jetty on the ground of "inexpediency" if future outer works are to be carried out.

May 6, 1880.—Sir John Coode, by telegram of same date, suspended all preliminary work on the bridge over Baaken's River.

May 12, 1880.—The board replied, drawing the attention of Government to the last paragraph but two of their report on jetties, dated 12th November, 1879; also suggesting reference of the whole question of harbour improvements to a commission, to sit at Port Elizabeth if approved.

[8.]

SIR JOHN COODE'S REPORT ON PORT ELIZABETH HARBOUR.

2, Westminster Chamber,
Westminster, August, 1877.The CROWN AGENTS for the Colonies, Downing-street,
London.

GENTLEMEN,—Before proceeding with the report which I have now to make upon the harbour of Port Elizabeth, as the result of my recent personal inspection and investigation, it is desirable to advert briefly to the works already executed, and to the views previously expressed by me on the subject.

Annexed hereto will be found two drawings prepared for the purpose of illustrating this report; No. 1 is a chart of the westernmost portion or "bight" of Algoa Bay in which Port Elizabeth is situated, and extends from Beacon Point on the south to a point on the shore about four miles north of the town. No. 2 is a plan of the foreshores and bay immediately fronting the town. On both these drawings the works I shall hereafter describe and recommend are shown by red colour.

Having been requested in 1868 to report upon the harbour works of the Colony, it was arranged that Mr. C. Neate, C.E., should proceed to the Cape, which he did in 1869, and among other harbours he examined Port Elizabeth and obtained the requisite data, whereupon I reported under date of 19th February, 1870.

As stated in that report, the works then executed consisted of a breakwater commencing on the south side of Baaken's River, and extending in an easterly direction for a distance of about 1,200 feet, at which point it turned in a northerly direction for a length of about 350 feet. It was constructed between 1856 and 1866, and was formed of timber piles driven at short distances apart, with a timber platform or decking about ten feet above high water of spring tides. The central portion of the work was filled in with a hearting of rubble stone up to the level of high water, above which the intervals between the three outer tiers of piles were filled with selected stone roughly packed together as a parapet.

The almost immediate effect of this work was to cause a very considerable diminution in the depth of water within and near it, and there were indications that the result might eventually be a very serious accumulation of sand on that part of the beach where the landing and loading operations are carried on by means of the surf-boats; in fact there was reason to apprehend that at no distant period the low water line along this part of the beach

would be advanced to an average extent of some 600 or 700 feet to seaward.

It was recommended by Mr. Neate, at the time of his visit, that a portion of the rubble should be removed from the east-and-west arm of the above work, and this recommendation was subsequently confirmed by me. As was anticipated at the time, this has proved to be a very tedious and expensive process, but if it had not been then taken in hand it can scarcely be doubted that the beach along the sea front used by the surf-boats would have grown out to the extent above indicated, and thus have most seriously interfered with the landing and shipping operations.

The works recommended in my report of 1870, were, 1st—An outer harbour; 2nd—An entrance basin; 3rd—An inner floating basin.

In view of the accumulation of sand which had taken place upon the beach on the north and south sides of the then executed works, but more especially on the north side, there was obviously, as I then stated, an element of uncertainty as to the effect of the proposed works. In order, therefore, to proceed as cautiously as possible, and in such a manner that the course adopted should be as far as practicable a tentative one, I recommended that the new works should be carried out by stages or sections, so that the effect of each section might be tested by experience prior to the execution of that succeeding it.

According to the information supplied to Mr. Neate in 1869, although there was no constant movement in the bay like the Agulhas current, nevertheless there was a prevalent and almost constant northerly "set" along the margin of the shore in front of the town, the effect of which was to move the sand along the beach in a northerly direction, and it was upon this circumstance that the design of 1870 and the order of procedure of the works comprehended in that design were based.

This order of procedure was proposed to be as follows:—The first step was the continuation of the removal of the rubble filling from within the east-and-west arm of the breakwater to the extent of 500 feet, and simultaneously therewith the outer jetty and retaining bank on the south side of the breakwater were to be undertaken, so that it might then be seen how far the desired result was, or would be, likely to be obtained. If the result was sufficiently encouraging the north-and-south arm of the existing work was to be extended, and the inner jetty constructed so as to complete the outer harbour.

The second step was the treatment of Baaken's River in such a manner that the practicability of obtaining and maintaining the depth necessary for a proper entrance to the third Section of the work (the proposed inner basin) might be brought to the test of actual trial.

If the resulting effects of these two sections proved satisfactory, the execution of the third section (the inner basin) would then have been entered upon with every possible assurance of a successful issue; but if the results should not justify the execution of the third section the only alternative seemed to be to make provision for conducting the trade of the port by means of jetties projected from the shore under the lee of the breakwater. This, as was then stated, although falling very far short of the accommodation that would be afforded by a floating basin with its accessories, would nevertheless be a considerable improvement upon anything then existing—or that had been devised for the port.

Work executed
between 1870
and 1876.

The removal of the stone hearting from the east-and-west arm of the breakwater was proceeded with under the direction of Mr. A. T. Andrews, who occasionally visited the works, as was also the erection of a jetty (which has been called No. 1 jetty) from the foot of Jetty-street, as had been suggested by Mr. Neate at the time of his visit, and confirmed by me, in order to meet the then pressing wants of the port.

On the return of Mr. Andrews to England, early in 1871, upon the completion of the breakwater and docks at Table Bay, the works at Port Elizabeth, consisting of the continuation of the removal of the rubble hearting from the breakwater, and the completion of No. 1 jetty, were placed under the charge of the Chief Inspector of Public Works, Mr. Robinson, C.E., and were superintended by Mr. Bisset, C.E.

Early in 1873, on the recommendation of Mr. Robinson, the widening of No. 1 jetty from 26 feet to 60 feet, and the construction of another (called No. 2 jetty, were determined upon; the latter was, however, suspended shortly after it was commenced, on the ground of its interference with the operations of landing and shipping by the surf-boats.

In the autumn of 1875, I was instructed to adopt the necessary measures for giving effect to a resolution of the House of Assembly, dated 3rd June of that year, authorising the construction "without delay" of the outer jetty and retaining bank forming the first section of the design of February, 1870; I was informed at the same time that the works at Port Elizabeth were to be executed under my direction, as in the case of the Table Bay Harbour, and thereupon Mr. William Shield, C.E., was appointed as resident engineer. He left England for the Colony at the end of January, 1876, taking with him instructions to the effect that whilst the preliminary arrangements were in hand for carrying out the permanent works, for which a specification was supplied, he was to make a complete working survey, with soundings, borings, observations upon tides, travelling sands, &c., &c. Immediately on his arrival Mr. Shield commenced the survey, &c., and put in hand the requisite arrangements for the

re-organization of the railway from the quarry, and an improved mode of working the quarry, together with the formation of a proper work-yard, with the shops, &c., necessary for the most ready and economical execution not only of the retaining bank but also of such other works as might follow. These preliminary arrangements are now practically as complete as necessary in the present phase of the question, and the retaining bank south of the old breakwater, according to the line shown on the annexed drawing, is fairly in hand.

Towards the latter end of 1875 a resolution was passed by the Harbour Board of Algoa Bay to the effect that it was considered by them to be expedient for me to visit and personally inspect the works in progress for improving the various ports and harbours of the Cape Colony. This proposal having been approved by the Colonial Government, the preliminaries were definitely arranged in due course, and I left England as soon thereafter as my other professional engagements permitted (in October last), and was occupied at Port Elizabeth at intervals in December, January, and February, for a period amounting in the whole to fully five weeks, no inconsiderable portion of my time whilst there having been taken up in making personal observations and study of the currents, the surf, and the physical conditions generally, but more especially on such matters as bore upon the question of sand-travel along the sea frontage between the extreme north and south ends of the town.

During the whole of my stay Mr. Shield and his assistant, Mr. Innes, were occupied very frequently, as occasion and change of wind and weather seemed to render desirable, in supplementing the current observations which had been virtually completed to the extent of the original instructions, by such further particulars as appeared to be necessary after inspecting the locality and examining the results procured up to that time.

These observations were taken, and the results recorded with the greatest care and accuracy, and from them a complete set of diagrams has been prepared, showing the currents under the most varying conditions of wind and tide. Having obtained copies of some valuable meteorological registers made by Mr. Hammond at the lighthouse, extending over a long series of years, I had a set of wind diagrams prepared by the resident engineer whilst I was at Port Elizabeth, and from these have obtained some important facts as to the relative prevalence and force of different winds. These two sets of diagrams, taken together, convey the most complete and instructive information as to the physical facts which should determine the general nature of harbour works at Port Elizabeth. I have not considered it necessary to have them lithographed, which would have been attended with great expense.

The distinct conclusion to be drawn from them is, that the

currents in that part of the bay which lies in front of Port Elizabeth (at any rate within a mile of the shore) are, as a rule, but very feeble, and both as regards direction and velocity depend upon the direction and force of the winds. The prevalence and force of south-east winds, coupled with the exposure of the bay to that quarter, result in the generation of frequent currents in a northerly direction, but the observations have clearly established the fact that currents do frequently run in a *southerly* and *south-easterly* direction, these being generated by north-westerly winds.

Trade of the Port. The embarkation and disembarkation of passengers and mails at Port Elizabeth is effected at No. 1 jetty whenever the weather permits, but this is subject to frequent and lengthened interruptions, as will be seen from the fact that it is not a very uncommon occurrence for all communication to be stopped for three or four days in succession, and on one occasion, in 1872, the stoppage extended over six consecutive days. Communication is sometimes possible by means of the surf-boats from the beach, when it is not so from the jetty.

As an instance of the serious inconvenience to which the port is liable in this respect, I may refer to the fact brought to my notice by Messrs. Blaine & Co. that the "Currie" steamer "*Windsor Castle*" arrived on Saturday, 5th December, 1874, and in consequence of the state of the weather could not communicate with the shore either on that day or on the Sunday, Monday, or Tuesday following, and it was not until the morning of Wednesday, the 9th, that the passengers could land, and even then they did so at considerable risk. This was an exceptional case, but as long as matters remain as they now are, the port must always be subject to detentions of this kind: On my return from Natal in January last, I was myself detained twenty-four hours in the bay unable to land in consequence of the danger signal being hoisted at the jetty, and no communication with the land was possible, except under such an amount of risk to life as would not have been justifiable.

As regards the mails I was informed by Mr. Wilmot, the chief postmaster, that they are sometimes landed and shipped at Port Elizabeth under very great difficulties, and occasionally even with considerable risk; he has on some occasions had no alternative but to "back" a beach wagon into the surf and transfer the mail-bags therefrom into a surf-boat.

A very limited portion only of the goods traffic is carried on at No. 1 jetty; the principal, in fact, for all practical purposes, the whole, of the heavy traffic is conducted by means of surf-boats belonging to the several boating companies upon that portion of the beach which lies within a distance of 300 yards to the north of Baaken's River. But this, like the work at the jetty,

is subject to frequent interruptions from the surf. Moreover, considerable losses often arise from damage sustained by goods in passing through the surf to or from the boats; indeed, it is a matter of surprise that the losses in this respect are not heavier.

In illustration of the magnitude of the goods traffic, I may give a few facts obtained by analysing some returns kindly furnished by Mr. Girdlestone, the Secretary of the Harbour Board, who in this and in many other respects rendered much aid at the time of my visit.

The number of vessels entered "inwards" at Port Elizabeth for the year 1876 was 376, with a tonnage of 328,822; the number "outwards" for the same year was 380, with a tonnage of 330,208, or a gross inwards and outwards of 659,030 tons.

It is a noteworthy fact that the gross tonnage has increased more than threefold in ten years, *i.e.*, from 202,737 tons in 1866 to 659,030 tons in 1876.

The value of the "imports" has increased within the last ten years from £958,746 to £2,416,691, and of the "exports" from £1,790,375 to £2,222,454.

The value of the wool exported per annum from Port Elizabeth has been £2,054,279, taking the average for the seven years ending 1876.

The charges by the four boating companies for landing and shipping goods have amounted to upwards of £65,000 per annum, taking the average of the three years, 1874-75-76. I understand that the charges for the year 1876 *per se* amounted to little short of £72,000. The average charge by the companies is 7s. per ton, or from about one-third to one-fourth of the rate of freight from England.

I was informed that the capital employed by the four companies in surf-boats, whaleboats, warps, horses, wagons, and gear, amounts to upwards of £30,000, irrespective of buildings held on lease.

The facts above stated all go to show the magnitude of the trade, the importance of the interests involved, and the great annual charges incurred directly and indirectly in landing and shipping goods at the port under present conditions, and in so far as these charges exceed the rates to which they might be reduced by the provision of proper harbour accommodation and appliances for landing and shipping goods, they form a tax upon the trade of the Colony.

The works comprehended in the design shown upon the annexed drawings, and now recommended for execution, are based upon a study of the physical conditions of the site, as elicited by the special and complete observations hereinbefore described. After careful and mature consideration of the whole subject, and a review of the conclusions at which I arrived during my

Works recom-
mended.

visit to Port Elizabeth, I have no hesitation in putting forward the works about to be described as those best adapted to meet the requirements of the trade of the port.

Retaining Bank.

I have already mentioned that the retaining bank on the south side of the old breakwater is now fairly in hand; it will be carried on to completion with all possible despatch. The line of this bank, as finally determined on the ground, is shown by red shading on the two annexed drawings. The timber framing of the old shield and the stone-hearting to about three feet below low water should be removed as soon as practicable, as I explained to the Harbour Board in February last when at Port Elizabeth.

Viaduct.

Starting from the face of the retaining bank just described, and about 150 feet southward of the east-and-west arm of the old work, and parallel thereto (that is, in about an E. by N. direction, magnetic), I propose to construct an iron viaduct extending seaward for a distance of 3,000 feet; this viaduct would consist of wrought iron piles placed in bays 30 feet apart, securely braced together, and supporting a deck of wrought iron girders, with a plated floor carrying the road surface; there will thus be practically no timber in this structure. Along the centre of this viaduct there would be a single line of railway laid to the colonial gauge of 3' 6", connected with the present railway station, and with the proposed standage ground, in the manner shown by red lines on drawing No. 2.

Breakwater Pier.

At the outer end of this viaduct I propose to construct a breakwater pier 2,000 feet in length, in a N. by E. direction; having a depth of 33 feet at the south or inner end, and 36 feet at the north or outer end at low water of spring tides. This pier would consist, in the main, of massive blocks of concrete so placed as to ensure a thoroughly stable and permanent structure; the base of the work would rest upon a mound of rubble, the foundations being carried down a sufficient depth to prevent disturbance by wave action. The coping or quay level would be 9 feet above high water mark, the deck of the viaduct being 15 feet above that level, there would thus be an incline leading from the viaduct to the quay, as described upon drawing No. 2. At the outer end of the proposed breakwater there would be a light-house and a return arm. The latter would form a root for a future jetty, should it be found desirable hereafter to construct a work in that position; in the mean time it would serve to shelter and cut off any run along the quay face of the breakwater. On the seaward side there would be a high sheltering parapet abutting on which sheds and covered standage spaces would be formed.

Breakwater Jetty.

With a view to shelter the berthage under the lee of the breakwater pier I propose to construct a masonry jetty extending

from the inner end of this pier in a N. W. direction for a length of 300 feet.

The total length of quayage along these works would be 2,160 feet, or practically the same as in the Alfred Dock at Table Bay.

Upon drawing No. 2, and also generally on the small scale drawing, No. 1, I have indicated what in my opinion will be the best form of extension for any berthage which may be required in connection with Port Elizabeth at some future period. These extensions would, in the first instance, take the form either of one or two jetties, as may be required, in the positions indicated and marked respectively No. 2 and No. 3, and if further accommodation should be necessary at any time thereafter it could be provided by the continuation of the breakwater and the construction of jetty No. 4.

Provision would be made for the direct supply of water to shipping alongside the pier. This is certainly desirable, seeing that the price now charged is £4 5s. per 1,000 gallons delivered to the ship in the anchorage by the contractor. By means of pipes along the proposed viaduct, water might be delivered by the Harbour Board at one-fourth of the present charge.

It is proposed to lay gas pipes along the viaduct for lighting the pier, to meet the contingency of the arrival of mail or passenger steamers by night. To make the arrangements fully complete, telegraphic communication would be established between the pier and the town.

If it be decided to act upon the recommendations herein made, the works should be undertaken in the following order:—The embankment would, as I have stated, be completed as early as practicable; the ironwork for the viaduct would be ordered forthwith and its erection commenced as early as practicable; in the meantime the depositing of the rubble mound, upon which the underwater foundations of the breakwater pier are to rest, would be carried on, as would also the removal of the shield, which it is anticipated would result in the scouring away of the sand to the extent crossed by red lines on the drawing, consequent upon the foreshore being brought under the direct action of the wave stroke. Upon the completion of the viaduct, or possibly before that date, the masonry of the inner end of the breakwater pier would be commenced. With regard to this point I may mention that the viaduct has been so proportioned as to enable the heavy concrete blocks which would be required for the construction of the breakwater to be conveyed over it.

The breakwater pier is placed at such a distance from the shore, and in such a direction, that if carried to the full length of 2,000 feet, shown by the dark red tint on the drawing, it would not, in my opinion, exercise any such sheltering effect

Extension of Berthage.

Water supply to shippieg, and gas for Pier.

Order of procedure.

Maintenance of depth.

on the beach line as would interfere with the normal sand-travel to an extent that would cause accumulation ; it *certainly* would not do so if the main arm were stopped at the site proposed for the future jetty No. 3. When the work had arrived at that point it would be seen whether it would be preferable to continue along the full coloured line or to provide any additional accommodation that might be required by means of the jetties, which latter might be extended further shoreward than is shown, if that course were found to be preferable.

I may say, with every confidence, that the design shown on the accompanying drawings is the only one which will afford satisfactory deep water berthing at Port Elizabeth, and also that it is so framed as to be capable of extension either in a northerly or westerly direction, as experience may show to be most desirable, a point of paramount importance in a case where the physical conditions are so complex as they are found to be at Port Elizabeth. The very complete observations and data which have now been obtained, coupled with the experience gained of the site, and my own personal observation of the locality, enable me to recommend the adoption of the design now proposed, feeling assured that the principles on which that design is framed will give a satisfactory result, either by carrying the main arm to the full extent indicated by the dark red colour, or by stopping at the site of No. 3 jetty (1,450 feet), and providing the further accommodation in the form of jetties, as before explained.

The drawing shows by red dotted lines a possible extension of the main arm, because an extension in this direction would afford the largest sheltered area for a given expenditure, but of course this extension would not be undertaken unless experience shall have demonstrated that it might be so carried out without any apprehension of an injurious effect upon the travel of the sand along the shore. It should be borne in mind in the consideration of the design that the preponderating current influences at work at Port Elizabeth, such as they are, would all operate in keeping the area between the proposed works and the shore free from silting.

When at Port Elizabeth it was mentioned to me that great advantage would arise from the extension of No. 1 jetty for a length of about 200 feet, so as to give increased accommodation, and by terminating outside the usual line of breakers to enable boats to come alongside more frequently and with greater safety than at present. I concur in the desirability of this being done, inasmuch as it is the only low water landing-place in the port.

After making out in sufficient detail estimates of the cost of the various parts of the proposed works based upon present prices at port Elizabeth, so far as the same are applicable, and upon the current rates of materials, freight, labour, &c., I find the costs of

Suggested
extension of
No. 1 Jetty.

Estimate.

the works shown upon the drawings, and recommended for execution, would be as follows :—

Completion of retaining bank	...	...	£734,530
Viaduct, 3,000 feet in length	...	...
Breakwater pier, if 1,450 feet long, <i>i.e.</i> , to position shown for "Future No. 3 Jetty"			
No. 1 Jetty, 300 feet in length...	...		
Hydraulic cranes and machinery	...		
Additional cost if carried to <i>full</i> extent of 2,000 feet as shown by red colour on plans			184,630
			<hr/>
			£919,160
			<hr/>
Removal of shield	...	...	£6,000
Extension of present jetty	...	...	4,500
			<hr/>
			£10,500
			<hr/>

The above amounts include contingencies, superintendence, and all construction charges, but not customs' duties, nor harbour dues on materials, plant, &c., imported for the works.

Adding to the sum of £72,000 (which sum was charged by the Harbour boating companies in the year 1876), the wharfage dues, which Revenue. I understand may be taken at £18,000 per annum for the next year, we have a total of £90,000 as the present payment for landing and shipping goods at Port Elizabeth. Putting down the most liberal sum to represent what would be the greatly diminished working expenses and incidental charges for the landing and shipping of goods by means of quays in direct communication with the shore at all times, both by railway connected with the general system of the Colony, and by ordinary conveyance, there would still remain a very considerable amount which, after payment of interest and a moderate annual sum as a sinking fund on the largest expenditure contemplated in the foregoing estimate, would still leave a balance applicable to the reduction of the dues on shipping, which might thus be relieved immediately upon the completion of the works, assuming the same amount of trade as in 1876, with a still further reduction as the debt became extinguished.

A question may arise as to the probable ultimate effect upon the trade of Port Elizabeth of the completion of the railway to Beaufort West on one hand and the improvement of the harbour of East London and the railway recently opened thence to Queen's Town on the other. Mr. Hunic, late M.L.A. for Port Elizabeth, as kindly furnished me with some very complete and valuable statistics and a key map of the trade now converging to

this port from different districts, and after considering these there would seem to be good ground for anticipating that, by the time the harbour works might be expected to be completed, the natural development of the trade of this part of the Colony would at least compensate—and probably more than compensate—for the traffic that would be diverted by reason of the new railways and the opening out of the port of East London. This result must of necessity be problematical at present, but the view here stated would seem to be a fair and reasonable one.

It was suggested to me whilst at Port Elizabeth that it would be well to examine the vicinity of "Jahleel Island," "St. Croix Island," and the "Bird Islands." I accordingly did so, and am unable to report either of them as affording a sufficient amount of natural protection to warrant the serious consideration of its utilization for sheltering works.

Drift sands. With respect to the subject of the drift sands, and the best means of arresting their progress, I fully reported my views on this subject to the Chief Commissioner of Crown Lands and Public Works, under date 5th March ultimo.

Conclusion.

I have much pleasure in acknowledging the assistance rendered to me by the chairman and the members of the Harbour Board during my stay at Port Elizabeth, also by Capt. Skead, the harbour master, who has had a very long and intimate acquaintance with the bay, and who gave me valuable information on several points connected with my inquiry.

My thanks are also due to Mr. Cowan, Secretary of the Port Elizabeth Chamber of Commerce, for furnishing particulars, relating to freights and other matters connected with the trade of the port.

I have, &c.,

JNO. COODE.

[9.]

ABSTRACT from Report of Commissioners, for Improving the Port and Harbour of Algoa Bay for 1877.

Since the commissioners' report, dated the 14th February last, Sir John Coode, the consulting engineer of harbour works in this Colony, completed his inspection of this port and harbour and left *en route* for England on the 22nd February, 1877.

On the 8th November last, the Commissioner of Public Works, &c., forwarded to this board Sir John Coode's report, dated August, 1877, of his inspection of this port and harbour, and his proposition for the future works for the improvement thereof. This re-

port has been referred to a sub-committee of this board for report on the financial bearings of the proposals, the result of which will be submitted for the consideration of His Excellency in due course.

—
[10.]

Algoa Bay Harbour Board,
Port Elizabeth, 12th April 1878.

The Hon. the COMMISSIONER OF CROWN LANDS
AND PUBLIC WORKS.

SIR,—With reference to your letter of the 8th November last, forwarding copies of the report of Sir John Coode, dated August, 1877, proposing improvements for the port and harbour of Algoa Bay; also to the first paragraph of the annual report of the commissioners (accompanying my letter of the 6th February last) commenting thereon, I am directed to state for the information of His Excellency the Governor and of the Government that at the meeting of the board on Tuesday, the 9th instant, the following resolutions were adopted:—

1st. "Resolved,—That the Government be requested to take the necessary measures in Parliament to carry into effect Sir John Coode's proposals, forwarding at the same time a copy of the report of a sub-committee (adopted by this board), suggesting the mode in which the necessary funds to meet the interest on the proposed outlay may be met.

2nd. "Resolved,—That the attention of the Government be called to the report of the 25th February last from the Resident Engineer of these works on the present condition of jetty No. 1, and that they may be urged to give immediate sanction for its extension by 200 feet in length, as included in Sir John Coode's proposals, but that it be constructed of iron piles, and that the old portion of the jetty be replaced by iron piling, as proposed in the Resident Engineer's report, observing that the estimated expense of £27,000, would be covered by the estimate of £1,000,000 referred to in the report of the sub-committee."

In regard to the second resolution, owing to the unsatisfactory condition of the present jetty No. 1, and to the probability of the lapse of a period of years before Sir John Coode's proposals could be carried into complete effect, and seeing the necessity for immediate and increased facilities for carrying on the landing and shipping operations of the port; the Commissioners desire

earnestly to urge upon His Excellency the Governor and the Government to sanction, as early as possible, the proposal for the construction of a new iron jetty.

Copies of the reports of the sub-committees and of the Resident Engineer of these works are herewith enclosed.

I have, &c.,

(Signed) NELSON GIRDLESTONE,
Secretary.

[11.]

REPORT OF SUB-COMMITTEE ON SIR JOHN COODE'S
REPORT OF AUGUST 1877.

Office of the Commissioner for Improving the
Port and Harbour of Algoa Bay,
Port Elizabeth, 9th April, 1878.

We have carefully considered Sir John Coode's proposals for the improvement of this port, in relation to the future financial arrangements of the board in connection therewith, and beg leave to report that, so far as we are enabled to form an opinion based upon existing statistics, the interest on the proposed outlay, estimated at about £1,000,000, could be met as follows, viz. :—

1st. By increase of present wharfage dues to 5s. per ton on all goods landed or shipped.

The dues at present existing may be estimated at about 1s. 3d. per ton, which, under Act No. 25 of 1875, should be increased to 1s. 10½d. per ton, so that the proposed increase of dues would amount to 3s. 1½d. per ton.

2nd. By the imposition of tonnage dues on all ships and vessels entering the port, based on the tariff adopted at Cape Town, viz., 6d. per ton.

The increased charges under these two heads, it is submitted, will be fully met by a positive reduction in the existing charges on landing and shipping goods, by the increased safety to ships, increased despatch in loading and unloading them, and consequent reduction in rates of freight and insurance which may be reasonably expected.

3rd. By supply of stone ballast and water to ships.

4th. From rents of harbour board property, which, when the present leases expire in 1890, will give a large increase of revenue.

The total income from these sources may be estimated as follows:—

Dues on goods landed and shipped, say on 180,000 tons, at 5s.	...	...	...	...	...	£45,000
Tonnage dues on shipping, say 300,000 tons, at 6d.						
per ton	...	...	...	...	...	7,500
Stone ballast and water	...	...	...	...	...	1,500
Beach property, at assessed value	...	...	...	...	...	6,000
						—
						Total £60,000

The estimated expenditure may also be taken at:—

Interest on the old debt, say	...	...	...	...	...	£3,500
Ditto on new debt, say £1,000,000, at 4½ per cent.						45,000
Probable cost of management, repairs, &c.	...	...	...	...	...	5,000
Drift Sands	...	...	...	...	...	2,000
						—
						Total £55,500

In making these calculations, we have taken no margin for any probable ultimate expansion of trade, which it may reasonably be hoped would result from the improved safety of the Bay and the increased facilities in loading and discharging ships, or from the completion of the system of railroads inland, in connection with Port Elizabeth; nor have we taken into account any increase to the harbour revenues which might arise from increased facilities afforded to steam vessels to coal at this port, or from rents of warehouses on the new breakwater.

(Signed)

P. W. COURT,
C. TENNANT JONES.

[12.]

EXTRACT from Report of the Commissioners for Improving the Port and Harbour of Algoa Bay for the Year 1878.

2. As regards the extended works proposed by Sir John Coode in his report, dated August, 1877, the commissioners, by their letter of the 12th April, 1878, recommended to the Government that his proposals be adopted and carried into effect, pointing out at the same time the mode in which the interest on the estimated cost of the works might be met. In reply, the Honourable the

Commissioner of Public Works, &c., by his letter dated 27th April, 1878 (No. 10/218), stated that the Government would not be justified at present in recommending to Parliament the expenditure of so large a sum as £1,000,000 sterling for the harbour works at this port.

3. The commissioners, at the same time, drew the attention of Government to the present unsatisfactory condition of No. 1 jetty, and proposed the construction of a new and extended iron pile jetty at a cost of about £27,000. This proposal was sanctioned by the Government, and a measure was introduced into Parliament to provide the necessary funds, which was passed by Act No. 17 of 1878. A requisition was forwarded on the 24th October, 1878, for the necessary materials required to be sent out from England, and preliminary operations have been commenced, so that on arrival of the materials the work may be pushed forward as rapidly as possible.

—
[13.]

No. 10/686.]

Office of the Commissioner of
Crown Lands and Public Works,
Cape of Good Hope,
26th July, 1879.

The SECRETARY, Harbour Board, Port Elizabeth.

SIR,—I have the honour to inform you that the Government, after careful consideration of the whole question, does not deem it expedient to carry out Sir John Coode's scheme for improving the harbour accommodation at Port Elizabeth, but is under the impression that the present requirements of the port will be met by the construction of jetties, of which the number and design will, of course, be subject to his approval.

With this view the Government is prepared to introduce a bill into Parliament during the present session to authorise the raising of the necessary funds by loan; and I am directed to request that your commissioners will cause the Commissioner to be furnished as early as possible with Mr. Shield's opinion as to the number and estimated cost of the jetties which he considers should be constructed, in order that the sum to be named in the bill may be ascertained.

I have, &c.,

(Signed) C. B. ELLIOTT,
Assistant Commissioner.

P.S.—Further information with respect to the sites and designs of the jetties can be furnished afterwards, at Mr. Shield's convenience.

Office of the Commissioner for
Improving the Port and Harbour of
Algoa Bay, 7th August, 1879.

The Hon'ble the COMMISSIONER OF PUBLIC WORKS, &c.,
Cape Town.

Sir,—I have the honour to inform you that, at a meeting of the commissioners, held on Tuesday, the 5th instant, to consider your letter of the 26th ultimo, No. 10/686, at which were present—

A. R. Orpen, Esq., Chairman
F. Skead, Esq., R.N.,
S. Bain, Esq. (Mayor),

It was resolved :—

“ The Secretary be directed to inform the Hon'ble Commissioner of Public Works, &c., that, taking into consideration,—

“ 1. That the Government have resolved for the present to abandon the large harbour works proposed by Sir John Coode, and recommended by the Harbour Commissioners for adoption ;

“ 2. That the Government desire to obtain Parliamentary powers during the present session to carry out a system of long jetties for facilitating the landing and shipping operations at this port ;

“ 3. That three members of this board are absent at Cape Town, attending to their Parliamentary duties, leaving a bare quorum ;”

The members of the board present desire to express their concurrence with the decision of the Government in regard to the construction of these jetties (seeing that the Government have abandoned Sir John Coode's plan), and to suggest that a bill for raising a further sum of £100,000 (one hundred thousand pounds sterling) be brought in this session to meet the expenses of these works, observing that on the return of the absent members of the board the subject will be fully discussed, and a detailed proposal, showing the sites, plans, and estimates, will be forwarded for the consideration of Government and the Consulting Engineer.

I have, &c.,

NELSON GIRDLESTONE,
Secretary.

[14.]

MINUTE

OF A

RESOLUTION of the PORT ELIZABETH HARBOUR BOARD, appointing a Committee of the whole Board for the purpose of taking Evidence as to the Sites of the Jetties to be constructed; Committee consisting of A. R. ORPEN, Esq. (Chairman), Hon. J. C. GEARD, M.L.C., J. S. KIRKWOOD, Esq., M.L.A., JOSEPH WALKER, Esq., M.L.A., S. BAIN, Esq. (Mayor of Port Elizabeth), P. W. COURT, Esq., and Captain SKEAD, R.N. (Port Captain).

At a meeting of the Harbour Board, held on Tuesday, the 23rd September, 1879, the letter of the Hon'ble Commissioner of Public Works, dated 26th July, 1879, and the board's reply thereto of the 7th August, 1879, were read; and, on the proposal of J. S. KIRKWOOD, Esq., M.L.A., seconded by Hon'ble J. GEARD, M.L.C., it was agreed:—"That the board resolve itself into committee, and sit from day to day (except Saturdays) to take evidence of persons of experience as to the sites of the jetties proposed to be constructed."

— — —

[15.]

Office of the Commissioners for
Improving the Port and Harbour of
Algoa Bay, 27th November, 1879.

The Hon'ble the COMMISSIONER OF PUBLIC WORKS, &c.,
Cape Town.

SIR,—Referring to your letter of the 26th July last, No. 10/686, informing the commissioners that the Government does not deem it expedient to carry out Sir John Coode's scheme for improving the harbour at this port, but that it was considered that the present requirements of the port would be met by the construction of jetties, the necessary funds for which Government was prepared to introduce a bill into Parliament, and an Act having been since passed, authorizing a loan of £100,000 as suggested by the board's letter of the 7th August last, I am now directed by the commissioners to inform you that on the return of the members of the board absent at Cape Town, and after the interview you were good enough to give to the commissioners on the 22nd September last, they resolved themselves into committee for the purpose of taking the evidence of persons of experience, &c., as to the site of the proposed jetties.

They have now completed that evidence, and a printed copy thereof is enclosed herewith for your information ; and they have drawn up a report thereon, which was carried by a majority of the board at their meeting of the 12th instant, and a copy thereof is attached to the minutes of evidence, and I am instructed to submit the proposals therein contained for your consideration and that of the consulting engineer.

The estimates given in the report for the respective works are *approximately* stated to avoid loss of time, but more accurate details will at once be gone into and reported to you as early as possible. It is, however, expected that no material difference will arise.

I have, &c.,

NELSON GIRDLESTONE,
Secretary.

P.S.—It is submitted that a copy of the minutes of evidence and the board's report thereon be forwarded to Sir John Coode.

N. G.

[16.]

REPORT of the COMMITTEE of the HARBOUR BOARD to take Evidence of Persons of experience as to the Sites of the Jetties proposed to be constructed in accordance with the letter of the 26th July last, from the Hon'ble Commissioner of Public Works.

Having carefully considered the evidence of sixteen witnesses, who have been examined before us, as to the proper sites for jetties proposed to be constructed to facilitate the landing and shipping operations at this port, we find that the preponderance of their evidence is in favour of the construction of jetties from the new retaining bank on the south side of the Baaken's River, and the further extension by 200 feet of the new iron pile jetty, about to be constructed at the foot of Jetty-street (as already recommended by Sir John Coode).

We hold the same views, and therefore, recommend for the consideration of the Government and of the consulting engineer (Sir J. Coode) :—

1st. The further extension of the new iron pile jetty (at foot of Jetty-street) by 200 feet in length, which it is estimated by the resident engineer will cost about £17,000 (evidence, page 91, No. 789), and is shown on the accompanying plan, marked A.

2nd. The construction of a precisely similar iron pile jetty to that about to be constructed at the foot of Jetty-street, to run out from about the centre of the new retaining bank, wherever borings may prove satisfactory, to a distance of about 800 feet, and at the angle and in the position shown on the plan, and marked B. The cost of this jetty is roughly estimated by the Resident Engineer at £45,000 (page 91, No. 785).

3rd. The construction of a smaller iron jetty for ballasting and other rough work, as well as watering, running out 500 feet from the new retaining bank at the position shown in the plan, marked D, as proposed by the resident engineer in his evidence (page 83), and which is estimated by him will cost £18,500.

4th The construction of these two jetties from the new retaining bank will necessitate the construction of a new iron tram-way bridge over the Baaken's River in lieu of the present wooden bridge, which is unsafe for railway traffic, as suggested by the resident engineer in his evidence (page 88, No. 752). The position is shown on the plan and marked C. The resident engineer estimates the cost of this bridge and its approaches at about £4,500.

The total cost of these proposed works would amount to say £85,000, leaving a balance out of the amount voted this year by Parliament of about £15,000, which we deem it desirable to reserve for contingencies, such as the laying in of sidings, purchase of steam tugs, or of land at corner of Jetty-street, &c.

On the completion of the two new jetties, viz.:—No. 1 jetty, marked A, and the jetty on the new retaining bank, marked B, there will be accommodation for discharging, in fair weather, sixteen cargo boats, or in rough, but working weather, eight boats lying in sufficiently deep water at low spring tides; and with proper steam appliances and rail communication from the jetties to the warehouses (which is included in the estimate) will considerably facilitate the landing and shipping operations of the port, and it is hoped will abolish the present primitive mode by Fingo labour.

If our proposals are sanctioned the jetty marked B would first be constructed, and also the bridge over the Baaken's River; then the lengthening of jetty marked A.

We desire to place on record that *had the decision of Government been in favour of the recommendation of this board to adopt the proposal of Sir John Coode's scheme (of 1877) for improving this harbour in its entirety at some early period, we would have recommended the adoption of the proposal of the resident engineer to construct the viaduct jetty on the line of the viaduct leading to the outer works; but in face of the decision of Government, as conveyed by the Hon'ble Commissioner's letter of the 26th July last, we are of opinion that the proposal of the resident engineer should not be adopted for the reasons: That, as a working jetty, it is not at the proper angle.*

It is in too close proximity to the admittedly foul ground of the site of the old Breakwater works, and is higher than is necessary, and, according to the evidence of the resident engineer, will, with his other proposals, absorb the entire sum voted by Parliament.

We desire also to suggest for the consideration of Sir John Coode that should it hereafter be decided to carry out larger works of the nature proposed by him in his report of August, 1877, the objections of the resident engineer to the proposals of many witnesses to construct jetties southward of the viaduct jetty, marked E on the plan, as shown in his evidence, pages 87 and 89, No. 774, might be met by constructing the outer works further to the southward, and by the carrying out of the viaduct leading to the outer works from or beyond the south end of the new retaining bank, and so avoid the possibility of the one work interfering with the other.

We cannot close this report without tendering the thanks of the commissioners to the gentlemen who have kindly responded to the invitation of the board to give their valuable evidence.

Harbour Board Offices,
Port Elizabeth, 12th November, 1879.

[17.]

PROPOSED SITES FOR JETTIES.

ABSTRACT from Minutes of the General Monthly Meeting of Members of the Chamber of Commerce, Port Elizabeth, held 15th December, 1879 ; P. W. Court, Esq., in the Chair.

Mr. Hume being called upon by the Chairman to propose the resolution standing in his name on the "Notice Paper," after giving his reasons at length for having placed the notice before the members, moved :—

"That the chamber desires to record its dissent from the Harbour Board Report of the 12th November, in so far as the proposed construction of the jetty, marked B on plan, is concerned ; and to express its approval of the jetty proposed by the resident engineer, marked E on plan, inasmuch as it can be utilized at any future time, when more extensive works shall be carried out ; such further works, in the opinion of this chamber, being absolutely required to meet the necessities of this port."

The only objections advanced by the Harbour Board to this jetty are :—

1st. That, as a working jetty, it is not at the proper angle.

2nd. That it is in too close proximity to the admittedly foul ground of the old breakwater.

3rd. That it is higher than is necessary.

4th. That with the resident engineer's other proposals, it will absorb the entire sum voted by Parliament.

To these objections the chamber replies:—

1st. That the face or quay of the working jetty on the north side is at the same angle as that of the jetty proposed by the Harbour Board, and that the south quay is only 14 to 15 degrees off that line, which, the bulk of the evidence goes to prove, is of no consequence.

2nd. That the measurements show that the working part of jetty E is at the same distance from the foul ground of the Breakwater as that of jetty B is from the solid wall of the retaining bank.

3rd. The chamber gathers from the evidence of the resident engineer that the height of the viaduct is not an essential feature of the work, and can be lowered, this height having been proposed merely for the purpose of keeping the quay dry.

4th. The money was voted by Parliament for the purpose of constructing jetties, and the chamber fails to see how any portion of it can be applied to the purchase of land and steam-tugs.

Should the above be carried, it will be proposed:—

“That a copy of this resolution be sent to the Hon. the Commissioner of Public Works.”

Chamber of Commerce, Port Elizabeth,
16th December, 1879.

The Hon. JOHN LAING, Commissioner of
Public Works.

SIR,—I have the honour to inform you that at a very full meeting of the members of the Chamber of Commerce, held on the 15th instant, a resolution was adopted in connection with the Harbour Board report of 12th November, on the proposed construction of jetties at this port, a printed copy of which I am directed to forward to the Commissioner of Public Works, and which I now beg to enclose herewith for your information.

I have the honour to be,

Sir,

Your obedient servant,

CHAS. COWEN, Secretary.

[18.]

Copy.—No. 10 | 1138.]

Office of the Commissioner of
Crown Lands and Public Works,
Cape Town, 30th December, 1879.

Sir JOHN COODE, C.E.

SIR,—I am directed to transmit to you the accompanying copy of the report of the committee of the Harbour Board of Algoa Bay, dated 12th November, 1879, together with copy of a letter from the secretary to the commissioners, dated 27th id., and I have to inform you that the commissioner has decided that the best course to adopt will be to construct the jetty, marked B on the annexed plan of the port, and to extend No. 1 jetty as shown in red on the part marked "A."

You will gather from the evidence taken by the committee that Mr. Shield, the engineer, would prefer having the viaduct constructed as shown on the plan in red marked "E," as this would be a commencement of your general plan for the improvement of the port.

Mr. Shield agrees, however, that, if this viaduct is not to be constructed, the best position for the new jetty is that marked "B," and I have to request that you will be good enough to give effect to this suggestion: namely, to prolong jetty No. 1, marked "A," and to construct new jetty, marked "B," unless you are decidedly of opinion that the construction of "B," would cause a serious obstruction to the port; or unless you have the very gravest reasons for opposing the construction of that jetty.

I may state that the Government is at present opposed to the carrying out of your original proposal in connection with this port, because it believes that the construction of an additional jetty or two will be sufficient to meet the wants of the port for some time to come, and you will no doubt agree with the Commissioner that, although your plan would *probably* achieve ultimate success, the issue must necessarily be attended to with some degree of uncertainty.

I have, &c.,

(Signed) C. B. ELLIOTT.

[19.]

LETTER FROM SIR JOHN COODE TO THE COMMISSIONER OF CROWN LANDS, &c.

5, Westminster Chambers, London, S.W.,
29th January, 1880.

The Hon. the COMMISSIONER OF CROWN LANDS, &c.

SIR,—I have the honour to acknowledge the receipt of your communication of 30th ultimo (10 | 1138), together with copy of letter from the Harbour Board of Algoa Bay, dated 27th November last; also the report of the committee of the board, and the evidence given before them on the subject of the sites of jetties proposed to be constructed there. The resident engineer, Mr. Shield, has supplied me with a plan, showing the positions proposed for the jetties referred to in the committee's report, and I will give this matter the consideration its importance deserves.

I have, &c.,

(Signed) JOHN COODE.

[20.]

PORT ELIZABETH HARBOUR.

5, Westminster Chambers, London, S.W.,
26th February, 1880.

The Hon. the COMMISSIONER OF CROWN LANDS AND
PUBLIC WORKS, Cape Town.

SIR,—Adverting to my letter to you of 29th ultimo, in acknowledgment of your communication of 30th December, I have now the honour to state for your information that I have duly considered the question of jetty sites at Port Elizabeth, and am of opinion that the construction of a jetty at or near the point marked B, in red, on the plan accompanying the report of the committee of the Harbour Board, dated 12th November ultimo, would be highly inexpedient, unless it were decided to abandon absolutely and for all time the execution of the outer works recommended in my report of August, 1877. It would, in my view, be found to be a subject of great regret hereafter, if, by any expenditure now to be incurred any work were undertaken which did not form part of, or could not be engrafted into, the design for outer works recommended by me in August, 1877.

With regard to the paragraph in your letter of 30th December, wherein you request me to give effect to the suggestion of the committee, viz.:—"To prolong jetty No. 1, marked 'A,' and to construct new jetty, marked 'B,'; unless you are decidedly of opinion that the construction of 'B' would cause a serious obstruction to the port; or unless you have the very gravest reasons for opposing the construction of that jetty;" I am unable to take any active steps in the way of preparing specifications and drawings for tenders until I receive from the Colony the particulars of the lengths of the several piles that will be required for the extension of jetty No. 1, marked 'A,' as it is absolutely necessary at the outset to know with precision, and in full detail, the character of the ground as ascertained by a series of careful borings, and the depth to the rock if such should exist within a reasonable distance of the bed of the bay. I gather from the last clause in the letter of the Harbour Board to yourself, of 27th November, that these details are now being procured. These remarks apply equally to jetty B, or any other line that may be finally decided upon, as they do to the extension of jetty No. 1.

I have, &c.,

(Signed) JOHN COODE.

—
[21]

Copy.]

Office of the Commissioners for
Improving the Port and Harbour of Algoa Bay,
Port Elizabeth, 29th April, 1880

The Hon. the COMMISSIONER of PUBLIC WORKS,
Cape Town.

SIR,—I am directed by the commissioners to forward to you a copy of a letter (Enclosure), dated 20th instant, from the Chamber of Commerce at this port, giving cover to a copy of a resolution of that body, passed at a general meeting of the chamber, held on the 19th instant, for your information; and at the same time to suggest that a commission should be appointed to sit at Port Elizabeth for the purpose of obtaining the fullest information regarding its requirements in the matter of affording protection to shipping visiting the port and facilitating landing and shipping operations.

I have, &c.,

(Signed) NELSON GIRDLESTONE,
Secretary.

[Enclosure.]

The Chamber of Commerce,
Port Elizabeth, 20th April, 1880.

NELSON GIRDLESTONE, Esq., Secretary to the
Harbour Board, Port Elizabeth.

SIR,—At a general meeting of members of the Chamber of Commerce held yesterday, the following resolution annexed, marked "A," was carried unanimously; and I was directed to forward a copy of it to you, with the request that you will be good enough to lay it before the board at your earliest convenience.

I have, &c.,

(Signed) CHAS. DOWER,
Secretary.

A. "That Government, having decided not to give effect to Sir John Coode's recommendations for the improvement of Algoa Bay, this chamber requests the Harbour Board to urge upon the Government to arrange with Sir John Hawkshaw or other eminent engineer, for a personal inspection of the harbour, and for a report as to the best mode of improving it, so as to afford safe berthing to ships while at anchor, and to facilitate their discharge."

[22.]

Office of the Commissioner for Improving
the Port and Harbour of Algoa Bay,
Port Elizabeth, 12th May, 1880.

The Hon. the COMMISSIONER OF PUBLIC WORKS, &c.,
Cape Town.

SIR,—In reply to your letter of the 24th ultimo, No. 10 | 349, enclosing copy of a letter addressed to you by Sir John Coode on the subject of the proposed new jetty B, I am directed by the commissioners to inform you that, at the ordinary meeting of the board held yesterday, the following resolution was passed:—

PRESENT :

A. R. ORPEN, Esq., (Chairman),

H. W. Pearson, Esq.,
Mayor.

Hon. H. Geard, M.I.C.,

C. F. Blaine, Esq.

"That the Harbour Board having suggested a commission of enquiry to be appointed, recommend that the Government refer

to such commission all the questions involved in the construction of jetties now objected to by Sir John Coode, and of the bridge now ordered to be deferred ; and that the special attention of the Government be called to the following paragraph in the report of the committee of the board, dated 12th November, 1879 :—We desire to place on record that, had the decision of Government been in favour of the recommendation of the board to adopt the proposal of Sir John Coode's scheme (of 1877) for improving this harbour, in its entirety, at some early period, we would have recommended the adoption of the proposal of the resident engineer to construct the viaduct jetty on the line of the viaduct leading to the outer works.

I have, &c.,

(Signed) NELSON GIRDLESTONE,
Secretary.

[23.]

Office of the Commissioner for Improving
the Port and Harbour of Algoa Bay,
Port Elizabeth, 15th May, 1880.

SIR, — In reply to your letter of the 12th instant, No. 10 | 439 am directed to inform you that the bridge abutments postponed by Sir John Coode's telegram are those of the proposed new iron bridge over the Baakens River; also to state that on the receipt of your letter of the 30th December last, No. 10/137, in accordance with the last paragraph thereof, the resident engineer was instructed to proceed with the preliminary work, and on the 19th March last the indent for the material required from England for the bridge was sent to you, and it is presumed has been forwarded to the Crown Agents for the Colonies, observing that until the receipt of Sir John Coode's telegram the work on the bridge was in full progress, but in consequence of its receipt the resident engineer has suspended the work.

It is also to be observed that this suspension of work on the south side of the Baakens River must also postpone the work of extension of No. 1 jetty by 200 feet (see paragraph of report of committees on jetties, 12th November, 1879).

I have, &c.,

(Signed) NELSON GIRDLESTONE,
Secretary.

[24.]

Copy.—No. 10/506.]

Office of the Commissioner of
 Crown Lands and Public Works,
 Cape of Good Hope,
 31st May, 1880.

The SECRETARY to the Harbour Board,
 Port Elizabeth.

SIR,—In acknowledging the receipt of your letters, dated the 29th ultimo and 12th instant, covering copies of resolutions adopted by your board relative to the improvement of the harbour works at Port Elizabeth, I am directed to inform you that before embarking upon the scheme proposed by Sir John Coode, which involves an expenditure of a million of money, the Government has thought it advisable to procure the best professional advice that can be obtained ; and, on the understanding that the board will defray all necessary expenses, the Commissioner has requested the Crown Agents to endeavour to secure the services of Sir John Hawkshaw or some other professional man of note, with the view of receiving his opinion in the matter.

I have, &c.,
 (Signed) C. B. ELLIOTT.

[25.]

Office of the Commissioner of
 Crown Lands and Public Works,
 Cape of Good Hope,
 1st June, 1880.

The SECRETARY to the Harbour Board,
 Port Elizabeth.

SIR,—With reference to your letter, dated 15th ultimo, I am directed to inform you that the Crown Agents for the Colonies have been requested to report the reason existing for the stoppage of the construction of the iron work for the Baaken's River bridge. The Commissioner is glad to learn from your subsequent letter of the 1st ultimo that this work has now been resumed.

The Crown Agents have also been instructed by telegram to proceed with the works for the jetties connected with the harbour improvement scheme, as already authorized ; and have been informed that Sir John Coode's general plan for the harbour works at Port Elizabeth has not been necessarily abandoned.

I have, &c.,
 (Signed) C. B. ELLIOTT.

[26.]

The following is a copy of a telegram from Commissioner, Cape, to Secretary, Harbour Board, Port Elizabeth:—"Do you wish me to suspend proceeding with jetty B, pending report of Sir J. Hawkshaw, or other engineer; also, do you agree to pay for latter coming out."

[27.]

HARBOUR BOARD MEETING.

Tuesday, 8th June, 1880.

PRESENT :

A. R. ORPEN, Esq., (Chairman),

F. Skead, Esq., R.N.,	|	G. F. Blaine, Esq.
H. W. Pearson, Esq.,		

Proposed by Mr. Pearson, seconded by Mr. Blaine:

"That the Harbour Board, approving of Sir J. Hawkshaw being appointed, desires to be informed by telegram what the cost or fee will probably be. When that has been ascertained from Sir J. Hawkshaw by the Crown Agents, and having referred all matters appertaining to jetties to the proposed commission, desire that such works be postponed until Sir J. Hawkshaw or other consulting engineers' plans be adopted."

Carried.

[28.]

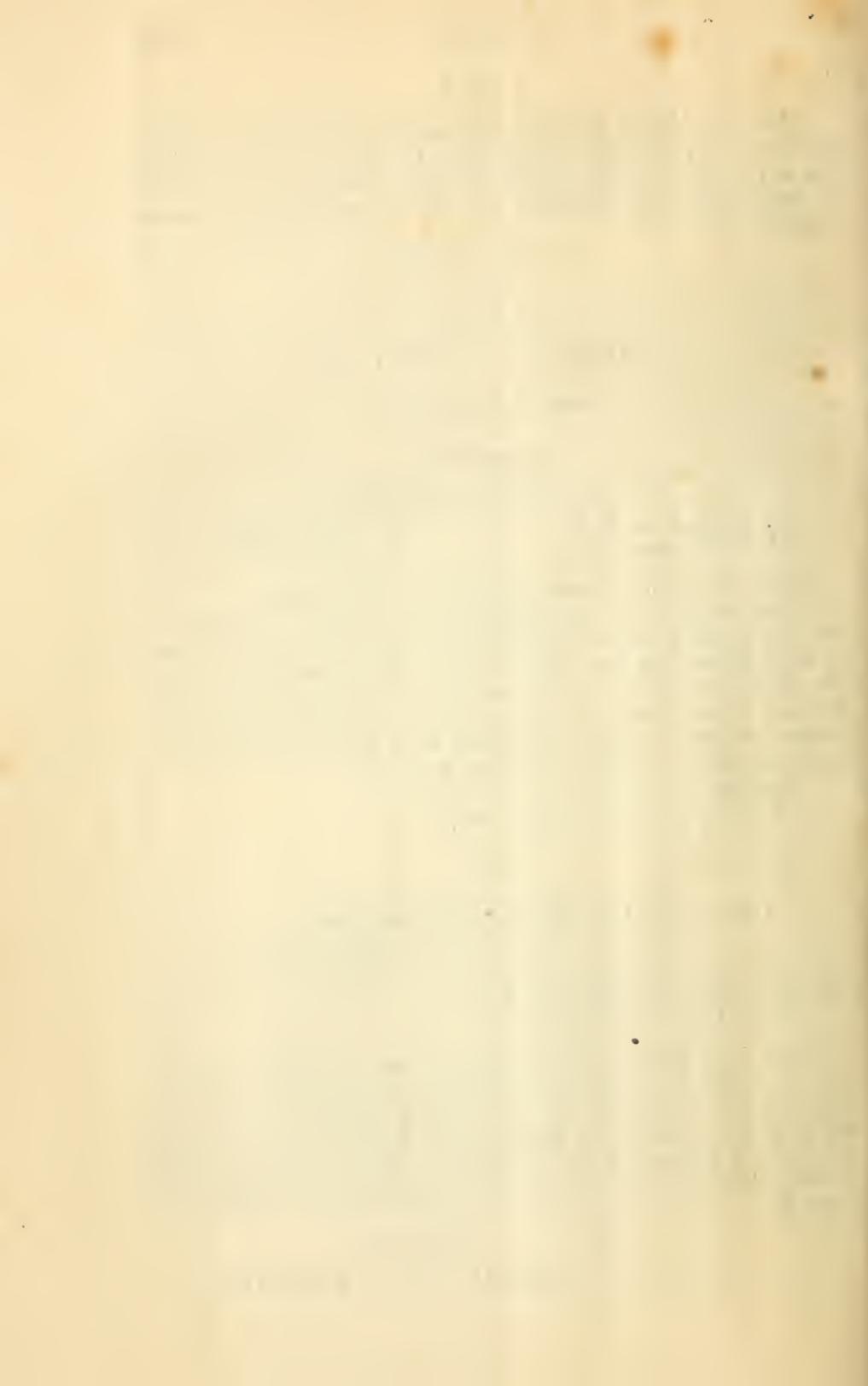
Office of the Commissioner of Crown Lands
and Public Works, Cape of Good Hope,
22nd June, 1880.

The Hon. J. GEARD, Esq., M.L.C.,
Council Chambers.

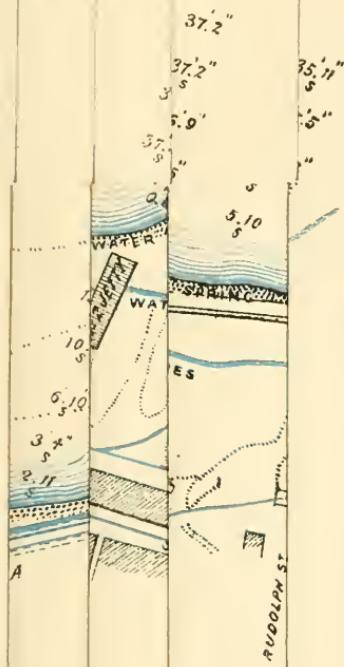
SIR,—I am directed by the Commissioner to acknowledge the receipt of your letter of the 17th instant, relative to the harbour works at Port Elizabeth, and, in enclosing copies of letters from the Algoa Bay Harbour Board, dated April 29, May 12, and 15, 1880, to inform you that the Crown Agents were instructed on the 8th instant to suspend the execution of the indent for jetty B.

I have, &c.,

(Signed) C. B. ELLIOTT.



R



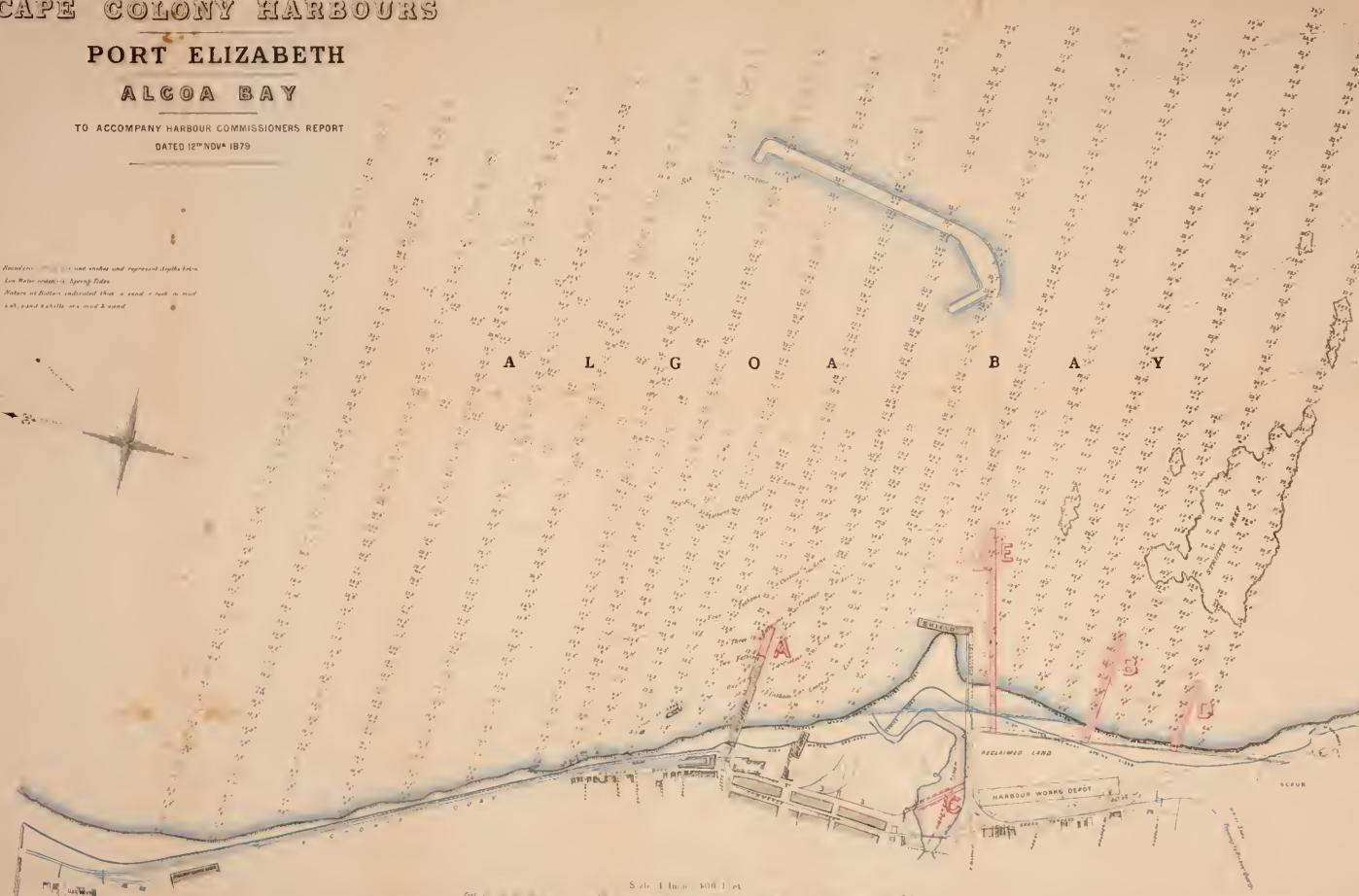
ME

CAPE COLONY HARBOURS
PORT ELIZABETH
ALGOA BAY

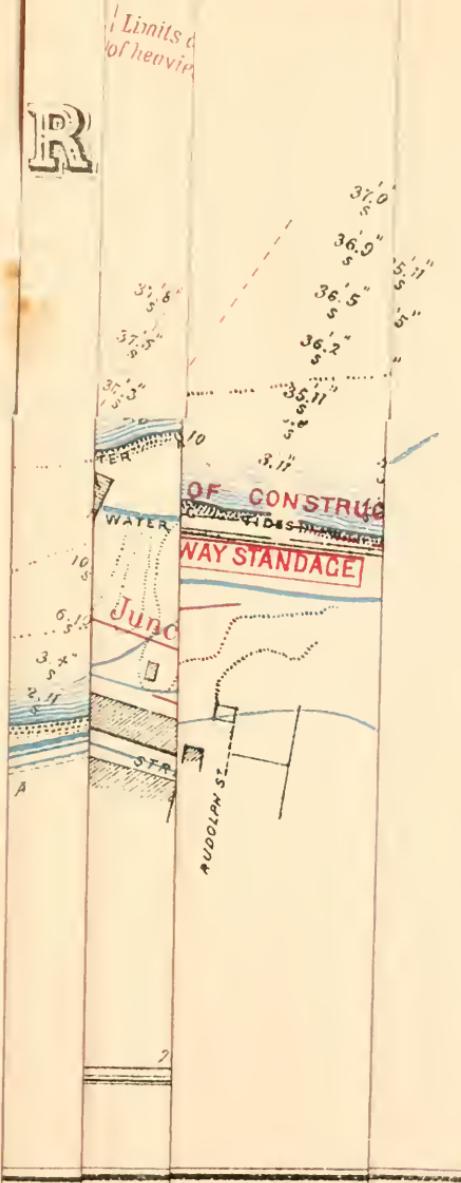
TO ACCOMPANY HARBOUR COMMISSIONERS REPORT
DATED 12th NOVth 1879

Neuston \downarrow had males and represent depths below
Low Water mark in Spring Tide
Nature of bottom indicated that a sand & rock as mud
soil, sand & shells are mixed & varied

A L G O A B A



BR



ME

CAPE COLONY HARBOURS
PORT ELIZABETH
ALGOA BAY

TO ACCOMPANY SIR JOHN COODES REPORT
DATED AUGUST 1877

The proposed Works are shewn by red Colour.

Barren areas are in fact sea bottom now represented depth below
low water ordinaries Spec of Table
Future of the ocean indicated there a sand & rock in areas
with sand & shells in areas & sand

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